Chapter X

Additional Resource Mobilization
ADDITIONAL RESOURCE MOBILISATION

It has been demonstrated in Chapter IX that universities and colleges in Uttar Pradesh are passing through great financial crisis. In fact, it is not something peculiar to U.P. alone. It is applicable on a wider scale to the whole of India. This is the reason why the University Grants Commission (UGC) has been directing the institutions to raise fee, and, more recently, it has advised to cut teaching posts by 10 percent as an austerity measure. The UGC has also advised not to fill any posts till a time-bound review is undertaken. The problem before the government is that it has to reduce expenditure in order to reduce budget deficit and the increasing pressure of students in institutions of higher learning demand an increasing expenditure to continue. The following two dimensions need to be analysed before going further to the issue of resource mobilisation.

1. Adoption of the new economic policy
2. Attempt to treat higher education as a non-merit good.

New Economic Policy

The overall determination of economic policy and the financing of economic and social services by the State government is led by those policy considerations which are held in priority by the Union Government in India, which in turn is influenced by global economic circumstances and challenges.

With sweeping changes across the globe over the last one decade in the philosophy and approach to economic development, the increasing role of the government in financing higher education has come under question. While

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primary education gets priority, higher education has been in a sense banished from the discussion of general education at the State level.\textsuperscript{2}  

Higher education is facing a financial crisis, which has emanated from the adoption of new economic policy and new approach to economic development. Earlier, 'more' was said to be better for the government, and it tried to bring as many economic and social activities under its purview and control as possible. It came forward to finance, almost to the point of total dominance, many sectors of the economy including higher education. But now, 'less' is considered better for the government and it is taking its hands off from financing and management of many activities. It must also be noted that too much dependence of higher education on government finance did not occur by choice. As the philanthropic support withdrew gradually from this sector, it became rather a compulsion for the universities to rely almost to the point of totality on State funds. This is the reason that government started dictating terms to universities. In fact, no university (or institution of higher learning) can enjoy complete academic autonomy, unless it has created for itself reliable financial autonomy. What is more unfortunate is that despite having surrendered academic autonomy to a great extent, universities are still not getting the desired financial support from the government for necessary expenditures and consequently have accumulated huge deficits.

**Higher Education as a Non-Merit Good**

Under the influence of the new economic policy, leave alone State governments, the Government of India itself wants to reduce public expenditure as such, and therefore also on higher education, whereas this sub-sector of education is by all means in infancy in a State like U.P., but it has come to suffer

\textsuperscript{2} For instance, the annual publication of the Directorate of Education, Government of U.P. – *Shiksha ki Pragati* now does not include chapter on Higher Education, while it discusses all other types / levels of education.
along with the national system of education. A research conducted by NIPFP\(^3\) (National Institutes of Public Finance and Policy) in 1997 led the Government of India to issue a discussion paper entitled: "Government Subsidies in India"\(^4\) with the avowed purpose of guaranteeing an informed debate, inter alia, on treating higher education as a non-merit good. To begin with this paper itself describes higher education as "a non-merit good" and the funds spent on it as "a non-merit subsidy".

This is a purely unilateral decision taken by Government of India with the singular objective of reducing fiscal deficit under the larger influence of the Structural Adjustment Programme (SAP). It is based on purely financial budgetary arguments and does not take into account the enormous positive contribution higher education makes in various ways to the social and economic development of the State and the country.

It can be argued with all theoretical details that in the theory of social goods, higher education along with the section of education has always been placed and treated as a "merit good." It needs not any re-emphasis that the category of "merit goods" lies in between public and private goods (though there are public goods with "privateness" and similarly, there are private goods with "publicness"). Needless to stress, merit goods are those whose consumption is believed to confer benefits on society as a whole greater than those reflected in consumer's own preferences for them. This implies that they have beneficial effects, presumably by making the consumers better or more productive people.

It is on the basis of the above argument that merit goods are subsidised by government and some times (in the absence of government or as a supplement) also provided by voluntary organisations and charities. Thus the move of the Government to reduce expenditure on higher education and to treat it as a non-

\(^3\) NIPFP: Government Subsidies in India, National Institute of Public Finance and Policy, New Delhi, March 1997.
merit good goes against the social and national interests of achieving an egalitarian society. It may further be pointed out that the spill over benefits of higher education or social returns to higher education are much higher in developing countries like India as compared to the developed countries (vide Chapter V). This is equally true in a relative sense for a state like Uttar Pradesh vis-à-vis the developed states of India.

Quality Linked Financing

Conventionally, the financing of higher education in U.P. has been based on public grants, which have been largely governed by political pulls and pressures. Since the adoption of the SAP (mentioned above), ways are being found to link the public financing of education with 'quality' in higher education, and to make it limited and more selective. There is no denying that the earlier system of budgetary allotment of funds and grants to higher education (vide Chapter VIII) had several weaknesses and called for suitable rationalisation. The system of financing education as it exists in U.K. appears to be a better alternative for the Indian States but it was never adopted though the academic system in India is British in origin.\(^5\)

The quality factor has acquired further significance in view of the establishment of the National Assessment and Accreditation Council (NAAC) in 1994.\(^6\) The operation of NAAC is still very limited. In the first three years of its establishment only 27 universities and 48 colleges from all over India applied for assessment and accreditation. As per the quality norms fixed by the NAAC, it is

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5 In U.K. local rates in the form of taxes on business and non-business property are earmarked for financing education and are supplemented by Parliamentary grants. Vide, Muzammil, M., 1989.
6 On the recommendation of Programme of Action (POA) document that provided the guidelines for the implementation of the National Policy on Education (1986), the UGC established NAAC with its head quarters in Bangalore.
ironical that only 10 universities were fulfilling the purpose for which they were established.7

It would be appreciated if financing of higher education in U.P. as well is truly linked with quality, but making 'quality' as a pretence to reduce expenditure of the government will not be advisable.

All in all, there is no denying that in future public expenditure for higher education in the State will not be forthcoming as easily as it was earlier. Therefore attention is drawn to rethink fee as a potential source of financing higher education in U.P. Theoretical considerations are taken first.

Privatising the Financing of Higher Education

With shrinking confidence in government's ability and efficiency, there has developed a tendency for increasing reliance on the "golden rule" of market mechanism. A large body of research8 has come up to substantiate the logic of greater use of fees and other user charges for providing merit goods, particularly higher education. This argument coincides with the liberalisation of economic policies being pursued widely these days, which suggests that government should reduce its functions and curtail down its expenditures. It may, however, be pointed out that even in developed countries of the world today, "almost three quarters of public spending is allocated to programmes (services) that are marketable but not marketed"9 (Rose: 1989, emphasis added). As against this, higher education in India is being planned to be subjected to market mechanism. If it happens at the national level, U.P. cannot remain for behind.

The theoretical support for this argument is that those who benefit from higher education should adequately pay for it. But fee is not like any other price

through which a commodity or a service is bought and sold. In fact pricing of higher education cannot be made efficient because of the following reasons:

1. Externalities of higher education cannot be quantified.
2. Detailed estimates of the price elasticity of demand for higher education are difficult to be made.
3. Adequate research evidence is still not available on the distributive consequence of pricing.
4. Sufficient evidence on the results of various models of pricing is also not available.
5. The impact of pricing of higher education is difficult to be examined carefully on the demand and supply efficiency of higher education, and
6. The relative efficiency of pricing over other methods of financing higher education is yet to be established.

**Discriminatory Pricing of Higher Education**

With a view to attain the twin objective of mobilising more resources and at the same time maintaining ‘ability to pay’ principle in fee charges to ensure equality considerations, discriminatory pricing of higher education is advocated. While some seats may be tuition fee free others should be adequately priced and a small percentage (10% or so of the total seats) may be fixed as payment seat. This is in line with what the UGC termed as 1:10:20 formula of fee fixations in private colleges of professional higher education (vide Chapter VI). Keeping in view the very low level contribution of fees it is suggested that it should be adequately revised so that the contribution from fee is raised to a minimum of 30-35 percent of the total educational income. In countries like USA in private colleges of higher education the contribution of fee is around 30 percent. However, in view of the severe resource crunch in higher education in U.P. it may be recommended
that fee contribution be raised to 30-35 percent from the present below 5 percent level at the minimum.

Discriminatory fee structure may be recommended for different groups of students (coming from various income groups of the society). Under this scheme, the top 25 percent of rich students (coming from highest income group) may be required to pay 75 percent of the recurring expenditure. Students belonging to second income quartile may also be asked to pay 50 percent of the recurring expenditure, and the third quartile may pay 25 percent of the recurring cost. While the last quartile (i.e., students from the poorest income quartile) may be exempted altogether from payment of fees.

Alternatively, if a more egalitarian approach is to be adopted, only two quartiles from top may be asked to pay higher fee while the lower two quartiles may be exempted from fee. If this method is adopted, it can mobilize more resources and can also ensure, at the same time, social justice.

The supporters of the policy of State intervention are of the view that not much can be done regarding the financial crisis in higher education. They feel that it is the duty of the State to support higher education. Comparison of higher education with a manufacturing industry, which generates its own resources by selling its own products, will not be in order. It is not possible for higher education institutions strictly in the same sense to generate their own resources, and thus, become self-supporting in financial matters. Even the private universities started in some countries are receiving financial help from the State. The Punnayya Commission too is of the view that the State must continue to accept the major responsibility for financing the essential maintenance and development requirements of the universities.

As has been said earlier, education (including higher education) is a merit good and the recipient of it must not be expected to pay entirely for its financing.
It is estimated that only 30 percent of students belong to the category that can pay and bear the full cost of higher education. This however should not be taken to interpret that universities should not make efforts to raise their own resources to supplement to what is provided to them as grant by the government to function smoothly.

**Emergence of the Crisis**

The process of evolution of any crisis itself provides clues for its solutions. The history of higher education in U.P. reveals that it largely began with philanthropic endeavour, private charity and voluntary endowments, which remained of long the mainstay of university finances. Students’ fees, donations and other voluntary contributions of various kinds played an important role. But gradually a declining trend in these flows set in (vide Chapter VII). The share of income and utility charges on account of laboratories, hostels, examinations, etc., has all gradually declined. It was, inter alia, because of a lack of concerted efforts to augment resources from the beneficiary groups. The university leadership successively failed in prevailing upon the potential donors to make contributions. The noble traditions of voluntary private contributions continued to decline and with the advent of our own government with the Independence of the country, the burden of financing got gradually shifted on to the shoulders of the government, which itself in those days was eager to embark upon ambitious plans for development of higher education in the State. A glance over the data in Chapter VII would reveal that the government’s responsibility of financing higher education has been continuously increasing, but the government’s enthusiasm, willingness, and of course, capacity to continue to spend on higher education has been declining.

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On the other hand, continued heavy reliance of universities in U.P. on public funds (vide Chapter VII for detailed data in this context) has had a very depressing effect on them by weakening their endeavour to raise their own resources. Fast declining internal resources and much lower increase in public financing than commensurate with ever increasing needs (for instance, enrolment in universities and colleges, Chapter III) appear to be the most rated reasons behind the present financial crisis in this sector. Severe resource constraints on the one hand, and the ever-increasing demand for higher education of various types on the other, have made things progressively worse. This has led to the urgent need of additional resources mobilisation.

Inter-University Experiences

It would be worthwhile to compare the financial managements of Bombay and Delhi universities – one is a Central university and the other a State university in Maharashtra.

While 66 percent of the funds are generated internally by Bombay University (as in 1990-91), which is a very notable feature, on the other hand, Delhi University is largely dependent on Central government. While 12.6 percent of income is generated by fees in Bombay University, in Delhi this ratio is only 2.6 percent. In Bombay University examination and related fee constitute about 20 percent and income from correspondence courses is about 10 percent. As stated above while Delhi University\(^\text{11}\) treats UGC as its milch cow, the other universities in the country, viz., Madras, Annamalai and Rohtak treat their correspondence courses as milch cow. The Delhi University vice-chancellor had to scrape the bottom of the barrel to raise money for staff salaries in September 1993. He was bailed out by a Rs.3.00 crore grant “on account” from Delhi University 1994-95 budget! He decided to solicit donations from political parties.

\(^{11}\) Vide: “Varsities must have Internal Funds”, news item in the *Times of India* 20.11.93.
The cash starved Delhi School of Economics in 1993 is reported to have slashed down its subscription from 600 journals to 200 journals. It could not even afford to replace its 20-year-old (vintage) typewriters and lecturers wanting to use dustless chalk had to pay for it themselves. The School sent out a frantic SOS to the government to save the library.\(^\text{12}\)

Grants to Delhi University were frozen by the UGC in 1991-92. The academic community was up in arms, and the UGC talked of the need for universities to generate more funds on their own. But little progress was made in this direction. Very late in the day fees were raised upward which had remained unchanged for decades.

More recently Delhi University is reported to be under the grip of a serious financial crisis.\(^\text{13}\) Senior university officials say that all developmental works have virtually come to a standstill. Training programmes are being scrapped and there is no money to pay salaries. The officials even went to the extent of saying that university has to be closed down if matters continued like this.

The approved budget for Delhi University is Rs.07.38 crores for 1999-2000, 95 percent of which goes for salary payment and a small percentage remains for maintenance. Of this amount the UGC has sanctioned only 38.12 crores though three-quarters of the year are over and the last quarter has begun. Under this financial constraint many academic programmes are being held up. For instance, Centre for Professional Development in Higher Education has cancelled its programme for English teachers.

Mention may be made of Calcutta University in West Bengal which is having real estate assets worth Rs.310 crores. In 1993 when the government of West Bengal announced that it would not be able to disburse salaries to staff

\(^\text{12}\) "Universities Struggle to Learn the ABC of Finance", Special Report, The Economic Times, New Delhi, Sunday, 17\(^{\text{th}}\) October 1993.

\(^\text{13}\) "Delhi University in red, may close down", The Times of India, Lucknow, 4.10.1999.
before the festive season, it sent the university into a financial tizzy. The annual budget of Calcutta University is of the order of Rs.33 crores and internal resources accounted for only Rs.2 crores. Rs.1.5 crores were generated from fee hike in 1993 and the university felt that more hike was not possible as further fee hike was beyond question because it was a very sensitive issue. Calcutta to revive itself from the financial crisis decided to sell off the gold and silver metals which remained unclaimed since 1901 and ordered that two university officers should travel in the same car and the same should not be used on Sundays.

In Karnataka, Bangalore University ran an annual deficit of Rs.3 crores in early 1990s. Efforts were made to fill up the financial gap through hike in fees but it met serious protests by students and the move was defeated.

Deficit in State Universities' Budget

As on 31 May 1992 it was reported by the vice-chancellors’ conference of U.P. universities that all the 14 State universities were running into deficit. The total deficit of three universities had reached Rs.26.52 crores of which Allahabad Universities alone accounted for a deficit of Rs.7.39 crores. On 11 November 1992 the Chief Minister of U.P. warned the universities to correct their budgets and start functioning in financial viability.

The banks are working for maintaining the Accounts of Allahabad University, viz., State Bank of India and Punjab National Bank. In November 1992 Allahabad University was due to pay Rs.80 lakhs to State Bank and Rs.1.00 crores to Punjab National Banks to clear its accounts and that was the reason that both the banks refused to give overdrafts to Allahabad University. Almost the same has been the case with Lucknow University. During 1992-93 the University had a deficit of about Rs.4.25 crores which was slightly reduced to Rs.4 crores by May 1993. The gravity of the situation could be judged from the fact that the

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14 Ibid.
university authorities were unable to pay remuneration to those teachers who had evaluated the examination answer books in 1992. When teachers raised hue and cry, the Government agreed to release teachers' remuneration on the condition that the University should increase the fees. Complying with the State Government's direction, the vice-chancellor increased the tuition as well the hostel fees in 1993.

Eighty percent of the State's and UGC grants are used to pay salaries of teachers. Both the grants are insufficient to meet the requirements and the University is running in deficit.

Economic Theory Applied to Higher Education

Financial crisis in institutions of higher education gives rise to several other constraints. If a diagnosis of this problem is to be attempted from an economic angle, a theory can be evolved for the huge enterprise of higher education in the State. Education has often been regarded as a social good or as a merit good. Now even this postulate is being questioned (as discussed earlier in this chapter). In fact, higher education was seldom analysed in the framework of economic theory. If primary tools of price theory are applied to education, the entire section can be brought, for purpose of analysis, into a price theory framework. The demand for higher education, its supply, the costs involved in producing educational services, the analysis of factor market in higher education, the persistence of excess demand for education, etc., all can be subjected to strict economic diagnosis.

From an economist's point of view higher education may be regarded as an economic good. A philanthropist may object that education is not an economic commodity, which can be put into the straight jacket of price theory. But in the present day economic system, nothing appears to work on a purely philosophical and philanthropic basis. Traditionally higher education has been left out of the price theory, but now, when it is competing for an increased share in the budget of
the government, and when people are increasingly feeling concerned about its quantity and quality, it cannot be treated in isolation without reference to factors like demand for and supply of higher education, resources, costs and the mismatch therein and its implication, etc.

If a theory of social good is applied to higher education (as it has largely been done thus far), it escapes the applications of market mechanism. But the application of social goods theory to higher education (in which government is the supplier) has not been able to solve the problems of higher education sector. An important reason for the inefficient working of higher education sector has been, as in the case of many other public undertakings, assured salaries and absence of monitoring systems for the performance of teachers and the institutions. Production of educational services in the institutions of higher learning financed almost entirely by the government with least participation of students' finance (the customers of the service), has been very inefficient. While in those institutions where private participation in one form or the other is substantial, the working has certainly shown better results.\textsuperscript{16} As a matter of fact, State monopoly in the supply of any commodity or service has often been decried by economists. But it is ironical to note that modern higher education has virtually been a State monopoly in several countries. In the communist countries of the world (like former USSR), this has been the case not only with education but also with the entire economy (or major part of it), which functioned with State's support and dictation. But now the efficiency of market mechanism has been recognised and well established there also and price theory is being applied to find out the solutions to current problems. Economic considerations in higher education are becoming important and non-economic explanation of the crisis in education is gradually losing ground. The system based on market mechanism becomes self-sustaining from the viewpoint of additional resource generation. In fact, if organised well it can

finance or subsidise other ventures, which may be on higher priority in the social scale of programmes, e.g., higher surplus may be used for financing primary education for the disadvantaged groups.

Modern higher education sector in U.P. as elsewhere in the country is a unique venture viewed from economic angle. It is a sector where the basic rules of economics are flouted.¹⁷,¹⁸

i. The consumers are not the buyers
ii. The producers are not the sellers
iii. The financiers are not the controllers

In the higher education sector, the students are the consumers of higher education who do not buy this service at a realistic price (fee). They enjoy it at unrealistic price (level of fee) which is not determined by the market forces. Students in universities, in particular, are consuming education at price (fee rate) which can by no means be said to be an appropriate price for the service (of higher education) vide Tables of data of per pupil fee in higher education in Chapter VII. One may say that it is true of other pure social goods as well, but all the same higher education has not been regarded by economists as a pure social good. Even later economists like Blaug¹⁹ viewed it as a good which should go with a price. As shown in chapter VII prevailing fee rates for higher education are too low and cannot be said to be appropriate. Only in a few institutions in higher education fees are appropriately determined. Though these are rare cases, they merit attention due to remarkably better performance. Only that market which is characterised by appropriate pricing of goods sold there can function efficiently and can sustain its existence. Thus, if the consumers of higher education, the

students, do not pay appropriately for their consumption (education), the system can hardly operate efficiently. Over the years, the demand for higher education has increased enormously (vide — the swelling figures of enrolment in higher education in Chapter III), but its price has not increased (or was not allowed to go up). In the case of an ordinary product, an increase in demand generates pressure on prices and, consequently, prices rise so as to limit demand to available supply of goods. In fact, prices serve as the balancing device, which acts to bring demand and supply into equilibrium. But in case of higher education, as in a ‘fair price shop’ prices are not allowed to go up despite increased demand.

Two means are available for limiting demand in a situation where price is not allowed to increase. The first is to allow the available supplies to be “overcrowded” which amounts in the case of higher education, enrolling students in excess of capacity, which compels the quality to fall. The second, if such overcrowding is not allowed, is, perhaps, resorting to “direct rationing”. This will primarily, be carried out by restriction on the number of students rather than by dilution of quality. This is the end result of keeping the level of fees (price) much below the normal cost. The rationing process enhances the discretionary powers of those responsible for choosing the beneficiaries from among the applicants, and reduces the power of those who secure admission.

Coming to the flouting of the second rule that in higher education producers are not the sellers, it may be said that while all producers work in self-interest, teachers as producers of (the services) higher education are not able to sell (set the price of) their product (education).

There is hardly any significant difference between the producers of education and producers of other goods. In view of the inexhaustible numbers of the potential consumers, producers may be tempted to restrict output below the maximum level. Thus, the producers will decide not only how many potential

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²⁰ Only at the primary level, though, it is expected to be supplied free of charge. But at that level, it is the constitutional obligation of the Government of India and that of U.P.
consumers to favour but also whom (from among them) to favour. They will select, therefore, that ratio of output which suits their own priorities. Their scale of operation will be considerably lower than their potential capabilities. This results in personalised discrimination and production of services on a lower scale. This can be rectified only if higher education subjected to market forces.

The third flouting rule of the market mechanism in higher education relates with tax payers whose money is used through the State government to finance higher education but the tax payers (financiers) are not the controllers or managers of higher education. The more integrated and closer the owners and controllers, the more efficient will be the management of any organization/institution.

Economists have long been concerned about the divorce of ownership from control even in modern business corporations. Corporate management has been alleged to hold the power to make decisions that are contrary to the interests of the stockholders who are the legal owners of the corporations. Whether and to what extent, managements act against the owner’s interests remains a question. This analogy can be applied to educational institutions where the separation of ownership from the effective control is far more complete. Corporate management does exercise a range of discretionary powers within which its own interest may be protected and promoted. Beyond these limits, however, management must give due regard to stockholder’s interests or face the threat of replacement either directly or through a take-over measure. No such curbs are provided for in the management of modern educational institutions, particularly universities, wherein, institution-wise, financial transactions are massive. Some economists have recommended a combined administrative or faculty hierarchy. At present, no market for university shares (which might allow outsiders to purchase rights to participate in management, replacement and takeover) exists.

In fact modern university management do what they please. They hardly pay any regard to the interest of the ultimate owners – the taxpayers, who, (as the
governments share in financing higher education by tax money is over 90 percent) are the real financiers of higher education.

Thus, as mentioned above in its detail logic, higher education in U.P. does not adhere to the economic theory and this, economically speaking, is the most valid reason of financial crisis and the consequent search for additional resource mobilisation.

Subsidiary Markets in Higher Education

Because of a failure of the application of economic (market) theory to higher education, "subsidiary markets" have developed in this sector\(^{21}\). Excess demand for higher education, which results from a policy of restricted admissions at the sub-optimal fee rates gives rise to subsidiary markets in higher education. The mushroom growth of private higher (professional institutions) and coaching institutes and the like is a proof of this.

These sub-markets operate on the principle of market pricing policy and are running efficiently. The existence and strength of these sub-markets disturbs the working of the main market (the higher education sector – university and collegiate education). The suppliers of higher education (teachers) in the main market are employed on assured salaries but teachers in the subsidiary markets, where they can dictate the price of their services, tend to work more efficiently, sincerely and to the best of their ability. Consequently – teaching in the main market, (the main educational institutions) suffers. Students go voluntarily to the subsidiary markets and pay market prices (higher fees) for purchasing higher education because they are sure that the services that they are getting is worth the (high) fee. That is why the subsidiary markets in higher education have not only come up but also are increasing in number and flourishing.

Since the subsidiary markets are working on market principle, they are doing well. There is no resource crunch and no panic to mobilize the additional resources. On the other hand, in the main market where the operation is being carried on at less than the potential equilibrium price and market theory is not being adhered to, the efficiency has fallen and caused severe financial crisis, which leads to an inspection with a view to find out ways for additional resource mobilisation.

Foreign Experience

Governments withdrawing from financing of higher educational institutions resorting to raising their own resources themselves in a professional manner, are now common features abroad. There is a visible shift from State supported higher education to the self financed system. This is true not only in the case of capitalist or market-based economies like those in Western Europe and America but also in countries like China.

Universities in Britain, for instance, are also making themselves gradually financially autonomous by reducing their reliance upon government funding agencies. In many countries abroad students’ fees for several specific courses are almost equal to the actual per pupil cost of providing more courses. Thinking on these lines for them becomes necessary because of the need for linking it to efficiency and productivity.

It is often argued that India is now having too many universities and that is why the problem of financing is getting acute. In this connection, mention may be made of Great Britain where there are 189 universities and 10 equivalent institutions for a population of 59 million only. If self-financing system is

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22 Higher Education Funding Council (HEFCE) for England: Profiles of Higher Education Institutions, 1994. (Of the 189 universities there are 148 in England, 21 in Scotland, 16 in Wales and 4 in Northern Ireland.)
adopted, universities running in deficit can be set right and many more universities may be accommodated in the system.

Projected Requirements of Finance in Uttar Pradesh

As has been demonstrated in Chapter IX higher educational expenditure has been rising at a very rapid rate and given the growth rate of enrolment of students it is likely to increase further. This section attempts an analysis of projections of the financial requirements for higher education in U.P. over the next 10 years. The projections of finance are based on alternative considerations of enrolment's projected growth in universities and colleges of the State.

Projections of enrolment has been attempted on the basis of:

i. The trend rate of growth in enrolments in higher education in U.P.

ii. The assumption that by the year 2010, in U.P. about 15 percent of the higher education age cohort population will join the higher education institutions. And it would not be out of place to mention that in many developing countries this percentage has already been reached. In fact the average enrolment ratio in higher education in Latin America is 17.2. In the Asian countries of South Korea, Philippines and Thailand the respective figures are 52 percent, 27.4 percent and 20.1 percent.

Table 10.1 attempts the first of the two alternative projections. It is based on the trend rate of growth of enrolments in higher education between 1990-91 to 1998-99 (for degree collegiate enrolment) and 1984-1985 to 1988-89 (for university enrolment). The reasons for selecting two different time periods for the two types of higher education enrolment in U.P. is that the data related with these as published by the Directorate of Higher Education in U.P. do not appear to be realistic over the entire period generally covered in this thesis. The degree collegiate enrolment appears to be most realistic (for the later years) for 1990-91 to 1998-99. (the figure for 1998-99 is taken from Annual Plan of U.P. 1999-2000 brought out in August 1999 which itself uses the Directorate's data). The statistics
related with university enrolments as published in the Directorate’s publication for the years in 1990s is unrealistic. That is why it was decided to bank upon 1980-81 to 1990-91 trend, which witnessed fast increase (Chapter III).

Table 10.1
Projected Enrolment in Higher Education in U.P.
(First Alternative)
(In Lakhs)

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<th>Year</th>
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<td>12.97</td>
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<td>11.00</td>
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</tbody>
</table>

Note: P,E refers to Projected total enrolment in higher Education in the First Alternative. This projection is based on trend rate of growth in degree collegiate enrolments between 1990-91 to 1998-99 and university enrolment between 1984-85 to 1988-89. Most realistic trend has been taken as base.

On the basis of the trend rate of growth of 1980-81 to 1991, the enrolment in universities and colleges is projected to be 12.30 lakhs in 1999-2000 so as to reach 21.03 lakhs by 2009-2010. It is also assumed that larger part of the enrolment will be taking place in degree colleges which will accommodate more than 80 percent by 2009-2010, while in 1999-2000 it is projected to be a little less than 80 percent. As for projections given in Table 10.1, the enrolment in university will reach 3.76 lakhs and that in colleges will be 17.27 lakhs. This projection does not include the consideration of any freeze being put on university

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23 For instance in Shiksha ki Pragati 1994-95, the figure of Higher Education enrolment is given as 1,90,604 and in the Shiksha ki Pragati 1996-97, the same figure is repeated for the year 1996-97. That there is no increase in university enrolment between the period 1994-95 to 1996-97 period is unbelievable. Several misprints in the data are also glaring.
or college admissions. We assume that the admissions policy for students will continue as it is, and at no point in time there will be effective curb on admissions.24

The second alternative projection of enrolments in higher education in U.P. is given in Table 10.2, which projects the enrolment at a relatively higher rate as compared to what has been done in Table 10.1.

Table 10.2
Projected Enrolment in Higher Education in U.P.
(Second Alternative)

<table>
<thead>
<tr>
<th>Year</th>
<th>College (P2E) (in Lakhs)</th>
<th>University (in Lakhs)</th>
<th>Total (P2E) (in Lakhs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999-2000</td>
<td>13.53</td>
<td>13.53</td>
<td>27.06</td>
</tr>
<tr>
<td>2000-01</td>
<td>14.86</td>
<td>14.86</td>
<td>29.72</td>
</tr>
<tr>
<td>2001-02</td>
<td>16.25</td>
<td>16.25</td>
<td>32.50</td>
</tr>
<tr>
<td>2002-03</td>
<td>17.77</td>
<td>17.77</td>
<td>35.54</td>
</tr>
<tr>
<td>2003-04</td>
<td>19.44</td>
<td>19.44</td>
<td>38.88</td>
</tr>
<tr>
<td>2004-05</td>
<td>21.26</td>
<td>21.26</td>
<td>42.52</td>
</tr>
<tr>
<td>2005-06</td>
<td>23.27</td>
<td>23.27</td>
<td>46.54</td>
</tr>
<tr>
<td>2006-07</td>
<td>25.46</td>
<td>25.46</td>
<td>50.92</td>
</tr>
<tr>
<td>2007-08</td>
<td>27.87</td>
<td>27.87</td>
<td>55.74</td>
</tr>
<tr>
<td>2008-09</td>
<td>30.50</td>
<td>30.50</td>
<td>61.00</td>
</tr>
<tr>
<td>2009-10</td>
<td>33.40</td>
<td>33.40</td>
<td>66.80</td>
</tr>
</tbody>
</table>

Note: The Second alternative of projection of enrolment (P2E) in higher education in U.P. is made on the assumption that by the year 2010 almost 16 percent of the higher education age cohort population will join colleges and universities, of which less than 1/5 will be in universities.

According to the second alternative projection, the enrolments are to reach 33.4 lakhs by 2009-10 with 4.88 lakhs in universities and 28.52 lakhs in colleges. This estimate is based on the assumption that by the year 2009-10, almost 15 percent of the projected age-cohort population in U.P. will be joining the institutions of higher education. But keeping in view the limits of admissions in universities, the projection is that while in 1999-2000, universities will accommodate almost 19 percent of the total projected enrolment, this ratio

24 Efforts are often made to reduce the seats in certain courses in higher education. But due to students (Unions) pressure the decisions are revoked.
will be reduced further to less than 15 percent by 2009-10. The projection assumes that colleges will accommodate increasingly larger number of students in the coming years. According to this estimate the limit of 20 lakhs higher education enrolment in U.P. will be reached before 2005.

Projected costs (requirement of finance) of higher education in U.P. is given in Table 10.3. Two alternative cost projections are given in this Table in column $P_1C$ which is the first alternative cost projection and $P_2C$ which is the second alternative cost projection. The first cost projection is based on the trend rate of growth during 1979-80 to 1993-94 in the cost of higher education in U.P., according to which the cost projection for 1999-2000 is worked out at almost Rs.500 crores which gradually goes up to Rs.1156 crores in 2009-2010.

### Table 10.3

**Projected Costs of Higher Education in U.P.**  
1999-2000 to 2009-2010  
(Rs. crores)

<table>
<thead>
<tr>
<th>Year</th>
<th>$P_1C$</th>
<th>$P_2C$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999-2000</td>
<td>498</td>
<td>843</td>
</tr>
<tr>
<td>2000-01</td>
<td>541</td>
<td>1001</td>
</tr>
<tr>
<td>2001-02</td>
<td>589</td>
<td>1191</td>
</tr>
<tr>
<td>2002-03</td>
<td>641</td>
<td>1414</td>
</tr>
<tr>
<td>2003-04</td>
<td>697</td>
<td>1680</td>
</tr>
<tr>
<td>2004-05</td>
<td>759</td>
<td>1996</td>
</tr>
<tr>
<td>2005-06</td>
<td>825</td>
<td>2371</td>
</tr>
<tr>
<td>2006-07</td>
<td>898</td>
<td>2817</td>
</tr>
<tr>
<td>2007-08</td>
<td>977</td>
<td>3346</td>
</tr>
<tr>
<td>2008-09</td>
<td>1063</td>
<td>3975</td>
</tr>
<tr>
<td>2009-10</td>
<td>1156</td>
<td>4723</td>
</tr>
</tbody>
</table>

Note: $P_1C$ - means First Alternative of Projected Costs of Higher Education in U.P. It is based on the long-term trend rate of growth 1979-80 to 1993-94. $P_2C$ - means Second alternative of projected costs of Higher Education in U.P. It is based on long-term trend rate of growth in costs as in $P_1C$ and it also assumes an average of 10 percent annual price rise over the decade. Base year is for both $P_1C$ and $P_2C$ is 1993-94.
The second alternative projection of cost assumes almost 10 percent price rise per year over the projected period of time and the data takes into account required compensation in the loss of value of money due to inflation. This estimate puts the figure at Rs.843 crores for 1999-2000, which rises to Rs.4723 crores by 2009-10.

Both the above projections are made on the base year 1993-94. It may further be noted that if qualitative improvement is needed still higher levels of costs/expenditure may be required.

If the projected costs of higher education, i.e., $P_1C$ and $P_2C$ are divided by the projected enrolment figures, i.e., $P_1E$ and $P_2E$, we get the projected per pupil cost of higher education in U.P. for the period 1999-2000 to 2009-10. The projected data are given in Table 10.4, which provides four alternative scenarios, which are given in columns $P_1C / P_1E$, $P_1C / P_2E$, $P_2C / P_1E$ and $P_2C / P_2E$, which reveal 4 different series of projected per pupil cost of higher education in U.P.:

### Table 10.4

**Per Pupil Projected Costs in Higher Education in U.P.**

<table>
<thead>
<tr>
<th>Year</th>
<th>First Alternative ($P_1C / P_1E$)</th>
<th>Second Alternative ($P_1C / P_2E$)</th>
<th>Third Alternative ($P_2C / P_1E$)</th>
<th>Fourth Alternative ($P_2C / P_2E$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999-2000</td>
<td>4048</td>
<td>3681</td>
<td>6854</td>
<td>6231</td>
</tr>
<tr>
<td>2000-01</td>
<td>4171</td>
<td>3641</td>
<td>7718</td>
<td>6736</td>
</tr>
<tr>
<td>2001-02</td>
<td>4302</td>
<td>3625</td>
<td>8700</td>
<td>7329</td>
</tr>
<tr>
<td>2002-03</td>
<td>4439</td>
<td>3607</td>
<td>9792</td>
<td>7957</td>
</tr>
<tr>
<td>2003-04</td>
<td>4610</td>
<td>3585</td>
<td>11111</td>
<td>8642</td>
</tr>
<tr>
<td>2004-05</td>
<td>4714</td>
<td>3570</td>
<td>12398</td>
<td>9388</td>
</tr>
<tr>
<td>2005-06</td>
<td>4864</td>
<td>3545</td>
<td>13980</td>
<td>10189</td>
</tr>
<tr>
<td>2006-07</td>
<td>4997</td>
<td>3527</td>
<td>15746</td>
<td>11064</td>
</tr>
<tr>
<td>2007-08</td>
<td>5172</td>
<td>3505</td>
<td>17713</td>
<td>12005</td>
</tr>
<tr>
<td>2008-09</td>
<td>5334</td>
<td>3485</td>
<td>19945</td>
<td>13033</td>
</tr>
<tr>
<td>2009-10</td>
<td>5497</td>
<td>3461</td>
<td>22458</td>
<td>14141</td>
</tr>
</tbody>
</table>

270
i. The lowest amounts of projection are those which are based on First alternative of cost projection and the second alternative of the enrolment projections. The data are given in column (3) of Table 10.4. It shows that if current cost estimation is done on the trend growth rates and enrolment increases so as to reach 15 percent level of enrolment ratio of the relevant age groups, then per pupil cost would in fact show a declining trend, i.e., cost estimates are too low as compared to projected enrolment even to maintain same level of per pupil cost.

ii. Series two is on the basis of first alternative projections of cost and first alternative projections of enrolment. It is shown in col. (2) of the said Table. It reveals a rising trend in per pupil cost of higher education in U.P. from 1999-2000 to 2009-10. The per pupil cost estimates go up from Rs.4048 to Rs.5497 over the said period.

iii. Series three is calculated on the basis of cost projection of second alternative and the enrolment projection also of the second alternative. In this case per pupil cost goes up from Rs.6231 in 1999-2000 to Rs.14,141 in the year 2009-10. This is shown in Col. (5) of the Table.

iv. The Fourth series is given in Col.4 of the above mentioned Table which is based on cost projections of the second alternative and enrolment projections of the first alternative. Consequently the per pupil cost projections show very rapid increase from Rs.6854 in 1999-2000 to Rs.22,458 in 2009-10.

An attempt has also been made to project per pupil fee and in doing so it was assumed that largely three types of argument are being given regarding the ratio of fee in total finance of higher education.\(^{25}\)

A. That only 35 percent burden should be on the students in the form of fee and the rest should come from other sources.

B. That 50 percent cost of higher education must be borne by the students in the form of fee and the remaining help should be mobilized from other sources (government grants.)

C. That in view of the general wane of the self-financing schemes in university it is pleaded that even 60 percent cost should be borne by students in the form of their fee and only 40 percent should be raised from other sources.

Table 10.5 presents projected data with respect to the above mentioned three alternatives on the basis of $P_1C$ and $P_1E$ in columns (2), (3) and (4) respectively.

**Table 10.5**

Projected Per Pupil Fee in Higher Education in U.P. Three Alternatives: Based on Projected Costs $P_1C$ and Projected Enrolment $P_1E$

<table>
<thead>
<tr>
<th>Year</th>
<th>$P_1CP_1EX_1$</th>
<th>$P_1CP_1EX_2$</th>
<th>$P_1CP_1EX_3$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999-2000</td>
<td>1417</td>
<td>2024</td>
<td>2429</td>
</tr>
<tr>
<td>2000-01</td>
<td>1460</td>
<td>2086</td>
<td>2503</td>
</tr>
<tr>
<td>2001-02</td>
<td>1506</td>
<td>2151</td>
<td>2581</td>
</tr>
<tr>
<td>2002-03</td>
<td>1554</td>
<td>2220</td>
<td>2663</td>
</tr>
<tr>
<td>2003-04</td>
<td>1613</td>
<td>2305</td>
<td>2766</td>
</tr>
<tr>
<td>2004-05</td>
<td>1650</td>
<td>2357</td>
<td>2829</td>
</tr>
<tr>
<td>2005-06</td>
<td>1703</td>
<td>2472</td>
<td>2919</td>
</tr>
<tr>
<td>2006-07</td>
<td>1757</td>
<td>2510</td>
<td>3012</td>
</tr>
<tr>
<td>2007-08</td>
<td>1810</td>
<td>2586</td>
<td>3103</td>
</tr>
<tr>
<td>2008-09</td>
<td>1867</td>
<td>2667</td>
<td>3200</td>
</tr>
<tr>
<td>2009-10</td>
<td>1924</td>
<td>2748</td>
<td>3298</td>
</tr>
</tbody>
</table>

Note: $P_1CP_1EX_1$ is projected on the assumption that students pay 35 percent of the total cost as fee. $P_1CP_1EX_2$ is on the assumption that students pay 50 percent of the total cost as fee. $P_1CP_1EX_3$ is on the assumption that students pay 60 percent.

It reveals (vide col.2) that if 35 percent projected cost of higher education is to be shifted to students as fees then per pupil fee would be Rs. 1417 to Rs. 1924 from 1999-2000 to 2000-10. Alternatively, if 50 percent burden is to be shifted to students then per pupil fee would be Rs. 2024 in 1999-2000 and will go up to
Rs.2748 by the end of the projected period. Finally, if it is decided to transfer even 60 percent burden on the shoulders of students in higher education in U.P. then per pupil fee will range from Rs.2429 to Rs.3298 over the period 1999-2000 to 2009-10. It must be remembered that these three alternatives are based on $P_1C/P_2E$.

If we apply the second projection of enrolment to the first projection of cost, i.e., $P_1C/P_2E$ then three different alternative series will be obtained with regard to per pupil fee. (vide Table 10.6).

**Table 10.6**

*Projected Per Pupil Fee in Higher Education in U.P.*

**Three Alternatives : Based on Projected Costs ($P_1C$) and Projected Enrolments ($P_2E$)**

(In Rupees)

<table>
<thead>
<tr>
<th>Year</th>
<th>$P_1C/P_2E_1$</th>
<th>$P_1C/P_2E_2$</th>
<th>$P_1C/P_2E_3$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999-2000</td>
<td>1288</td>
<td>1840</td>
<td>2208</td>
</tr>
<tr>
<td>2000-01</td>
<td>1274</td>
<td>1820</td>
<td>2184</td>
</tr>
<tr>
<td>2001-02</td>
<td>1268</td>
<td>1812</td>
<td>2174</td>
</tr>
<tr>
<td>2002-03</td>
<td>1262</td>
<td>1804</td>
<td>2164</td>
</tr>
<tr>
<td>2003-04</td>
<td>1255</td>
<td>1793</td>
<td>2151</td>
</tr>
<tr>
<td>2004-05</td>
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<td>2005-06</td>
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<td>2127</td>
</tr>
<tr>
<td>2006-07</td>
<td>1234</td>
<td>1764</td>
<td>2116</td>
</tr>
<tr>
<td>2007-08</td>
<td>1227</td>
<td>1753</td>
<td>2103</td>
</tr>
<tr>
<td>2008-09</td>
<td>1220</td>
<td>1743</td>
<td>2091</td>
</tr>
<tr>
<td>2009-10</td>
<td>1211</td>
<td>1730</td>
<td>2077</td>
</tr>
</tbody>
</table>

Note: $P_1C/P_2E_1$ is calculated on the assumption that students pay 35% of the total cost as fee $P_1C/P_2E_2$ assumes 50 percent cost to be borne as fee by students. $P_1C/P_2E_3$ is projected on the assumption of 60 % cost to be paid by students as fee.
It will be observed that all the three columns of per pupil fee columns 2, 3 and 4 show a declining trend. It is obvious as the data in column 3 of Table 10.4 itself shows a declining trend. The variations in columns 2, 3 and 4 of Table 10.6 is because of the 35, 50 and 60 percent ratios as mentioned above. Column (2) assumes 35 percent allocation of burden of the total higher education cost on students. It gives figures ranging from Rs.1288 to Rs.1211 over the said period. Similarly column (3) gives figures based on the assumption that 50 percent cost is transferred to student which they should pay as fee from Rs.1840 to Rs.1730 over the same period. If 60 percent cost is shifted to students then the related per pupil fee rates would range from Rs.2208 to 2077 over 1999-2000 to 2009-10. The reasons for the declining trend in this estimate have already been explained above.

Table 10.7 presents the estimated data of per pupil fee based on the above mentioned three ratios. Data in this Table is based on $P_2C/P_1E$ (Column 4 of Table 10.4).

<table>
<thead>
<tr>
<th>Year</th>
<th>$P_2C_{PiEX_1}$</th>
<th>$P_2C_{PiEX_2}$</th>
<th>$P_2C_{PiEX_3}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999-2000</td>
<td>2399</td>
<td>3427</td>
<td>4112</td>
</tr>
<tr>
<td>2000-01</td>
<td>2701</td>
<td>3859</td>
<td>4631</td>
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<tr>
<td>2001-02</td>
<td>3045</td>
<td>4350</td>
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<td>2002-03</td>
<td>3427</td>
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<td>5875</td>
</tr>
<tr>
<td>2003-04</td>
<td>3889</td>
<td>5555</td>
<td>6666</td>
</tr>
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<td>2004-05</td>
<td>4339</td>
<td>6198</td>
<td>7439</td>
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<td>2005-06</td>
<td>4893</td>
<td>6990</td>
<td>8388</td>
</tr>
<tr>
<td>2006-07</td>
<td>5511</td>
<td>7873</td>
<td>9448</td>
</tr>
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<td>2007-08</td>
<td>6200</td>
<td>8857</td>
<td>10628</td>
</tr>
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<td>2008-09</td>
<td>6981</td>
<td>9972</td>
<td>11967</td>
</tr>
<tr>
<td>2009-10</td>
<td>7860</td>
<td>11229</td>
<td>13475</td>
</tr>
</tbody>
</table>

Note: $P_2C_{PiEX_1}$ is calculated on the assumption that students pay 35% of the total cost as fee. $P_2C_{PiEX_2}$ assumes 50 percent cost to be borne as fee by students. $P_2C_{PiEX_3}$ is projected on the assumption of 60% cost to be paid by students as fee.
This Table shows a rapid increase in the estimated values of per pupil fee. If we assume 35 percent transfer of the burden of cost to students, then the fee will range from Rs.2399 to Rs.7860 from 1999-2000 to 2009-10. Similarly in the case of 50 percent cost being shifted to the students the projected fee would be Rs.3427 to Rs.11229 over the same period. But if 60 percent cost were to be borne by students as fee then per pupil fee would be Rs.4112 in the first year and Rs.13475 in the last year of the period shown in the Table.

The fourth alternative Table of per pupil fee projection is Table 10.8.

### Table 10.8

**Projected Per Pupil Fee in Higher Education in U.P.**  
**Three Alternatives: Based on Projected Costs P2C and Projected Enrolment P2E**  
(In Rupees)

<table>
<thead>
<tr>
<th>Year</th>
<th>P2CP2EX1</th>
<th>P2CP2EX2</th>
<th>P2CP2EX3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999-2000</td>
<td>2181</td>
<td>3115</td>
<td>3738</td>
</tr>
<tr>
<td>2000-01</td>
<td>2358</td>
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<td>2562</td>
<td>3664</td>
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<td>2002-03</td>
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<td>5633</td>
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<td>2005-06</td>
<td>3566</td>
<td>5091</td>
<td>6113</td>
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<tr>
<td>2006-07</td>
<td>3873</td>
<td>5532</td>
<td>6639</td>
</tr>
<tr>
<td>2007-08</td>
<td>4202</td>
<td>6003</td>
<td>7203</td>
</tr>
<tr>
<td>2008-09</td>
<td>4561</td>
<td>6516</td>
<td>7820</td>
</tr>
<tr>
<td>2009-10</td>
<td>4949</td>
<td>7070</td>
<td>8484</td>
</tr>
</tbody>
</table>

Note: P2CP2EX1 is calculated on the assumption that students pay 35% of the total cost as fee. P2CP2EX2 assumes 50 percent cost to be borne as fee by students. P2CP2EX3 is projected on the assumption of 60% cost to be paid by students as fee.

The data in this table is based on data given in column (3) of the Table 10.3 (P2C) and column (4) of Table 10.2 (P2E). In this Table on the first assumption of 35 percent share as fee, the amount goes up from Rs.2181 to
Rs.4949 from 1999-2000 to 2009-10. If 50 percent burden were to be given to student, the figures would be Rs.3115 and Rs.7070 respectively. In case of 60 percent of cost being transferred to students the per pupil fee would be Rs.3738 in the first year and Rs.8484 in the last year of the period mentioned in the Table.

So far as the projection of public expenditure on higher education is concerned, it has been done analogous to the ratios of fees, i.e., if 35 percent burden is shifted to student 65 percent will have to be borne by government, assuming further that the share of voluntary contributions is negligible and the total cost is divided into two parts only, public money, i.e., public expenditure and private cost, i.e., fee paid by students of higher education. Projected figures of public expenditure are given in Tables 10.9 and 10.10.

Table 10.9

Projected Public Expenditure Required to Meet Projected Costs of Higher Education in U.P.

First Alternative Based on Projected Costs P1C

(In Rs. crores)

<table>
<thead>
<tr>
<th>Year</th>
<th>P1CY1</th>
<th>P1CY2</th>
<th>P1CY3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999-2000</td>
<td>199</td>
<td>249</td>
<td>324</td>
</tr>
<tr>
<td>2000-01</td>
<td>216</td>
<td>271</td>
<td>352</td>
</tr>
<tr>
<td>2001-02</td>
<td>236</td>
<td>294</td>
<td>383</td>
</tr>
<tr>
<td>2002-03</td>
<td>256</td>
<td>321</td>
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<tr>
<td>2003-04</td>
<td>279</td>
<td>349</td>
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<tr>
<td>2004-05</td>
<td>307</td>
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<td>493</td>
</tr>
<tr>
<td>2005-06</td>
<td>330</td>
<td>413</td>
<td>536</td>
</tr>
<tr>
<td>2006-07</td>
<td>359</td>
<td>449</td>
<td>584</td>
</tr>
<tr>
<td>2007-08</td>
<td>391</td>
<td>489</td>
<td>635</td>
</tr>
<tr>
<td>2008-09</td>
<td>425</td>
<td>532</td>
<td>691</td>
</tr>
<tr>
<td>2009-10</td>
<td>462</td>
<td>578</td>
<td>751</td>
</tr>
</tbody>
</table>

Note: P1CY1 is on the assumption that 40 percent of the total will have to be borne by government. P1CY2 is based on the assumption of this ratio being 50 percent and P1CY3 assumes it at 65 percent.
While Table 10.9 takes up the presentation of the three alternative projections based on first projection of cost P1C, Table 10.10 gives the three analogous estimates based on second projection of cost P2C. Table 10.9 shows that if only 40 percent cost is to be defrayed by government, then the projected public expenditure would be Rs.199 crores in 1999-2000 and Rs.462 crores in the year 2009-10. But if 50 percent cost were to be borne by the government the figures would be Rs.249 crores and Rs.578 crores respectively. In case 65 percent share of the cost is to be financed by public expenditure, the said figures would be Rs.324 crores and Rs.751 crores respectively.

Table 10.10

Projected Public Expenditure required to meet Projected Costs of Higher Education in U.P.
Second Alternative Based on Projected Costs P2C
(In Rs. crores)

<table>
<thead>
<tr>
<th>Year</th>
<th>P2CY1</th>
<th>P2CY2</th>
<th>P2CY3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999-2000</td>
<td>337</td>
<td>422</td>
<td>548</td>
</tr>
<tr>
<td>2000-01</td>
<td>400</td>
<td>501</td>
<td>651</td>
</tr>
<tr>
<td>2001-02</td>
<td>476</td>
<td>596</td>
<td>774</td>
</tr>
<tr>
<td>2002-03</td>
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<td>707</td>
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<td>2003-04</td>
<td>672</td>
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<td>1297</td>
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<tr>
<td>2005-06</td>
<td>948</td>
<td>1186</td>
<td>1541</td>
</tr>
<tr>
<td>2006-07</td>
<td>1127</td>
<td>1409</td>
<td>1831</td>
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<tr>
<td>2007-08</td>
<td>1338</td>
<td>1673</td>
<td>2175</td>
</tr>
<tr>
<td>2008-09</td>
<td>1590</td>
<td>1988</td>
<td>2584</td>
</tr>
<tr>
<td>2009-10</td>
<td>1889</td>
<td>2362</td>
<td>3070</td>
</tr>
</tbody>
</table>

Note: P2CY1 is on the assumption that 40 percent of the total will have to be borne by government. P2CY2 is based on the assumption of this ratio being 50 percent and P2CY3 assumes it at 65 percent.

Similarly Table 10.10 presents another set of the three estimates based on P2C. This Table puts greater burden on the government as P2C > P1C. Therefore, even in the same ratios 40 percent, 50 percent and 65 percent of cost to be
If 40 percent cost is to be defrayed by the government then the needed public expenditure for higher education will be Rs. 337 crores in 1990-2000 and will go up to Rs. 1889 crores in 2009-10. Similarly in case of 50 percent burden being financed by government the respective figures will be Rs. 422 crores and 2362 crores in that order. In case 65 percent cost is to be defrayed by public expenditure, its amount is projected to be Rs. 548 crores in 1999-2000 and Rs. 3070 in 2009-10.

**Alternatives of Additional Resource Mobilisation**

Basically, in view of the dwindling or almost negligible share of charity money for higher education (as given in Chapter VII), there remains only two sources of funding – government grants and fees from students. That is why the exercise of the projection of cost and financing requirement given above has been done in respect of the above two sources. A large group of people are still of the view that it is the duty of the state to support higher education. However, with increasing financial burden on the government and in view of its other obligations, universities are expected now to generate their own resources through some other means as well.

Since the present financial crisis in higher education as mentioned above has several dimensions, any researcher may be constrained in the analysis and in suggesting workable reforms to suit one or a few angles. This may not be holistic and may not be entirely satisfactory. With this limitation in mind if we attempt to provide an answer to this vexed problem from the viewpoint of economic theory, we would expect the consumers (students) to purchase higher education and if they do so, at a reasonable price.

When food and fertiliser subsidies are being withdrawn there appears to be a weak logic in advocating to continue government subsidy in higher education. The government has already started thinking in terms of freezing grants to higher
education and treating it as a non-merit good. In fact, the plan of the government is to gradually take its hands off from the financing of higher education and leave the matter of financing to the institutions themselves. If government's share is reduced or stopped then universities will be left with no option but to recover cost from fees by raising it to the desired extent. Two important aspects of the need to overcome the financial crisis facing universities and other institutions of higher education are (1) mobilization of resources, and (2) better utilization and management of the resources raised.

The application of market theory to higher education as mentioned above will not only resolve the financial crisis but will also at the same time increase the efficiency to the maximum. The producers of the services of higher education, i.e., teachers should be able to sell the same. The more scarce and specific educational services, particularly, should be adequately charged for.

An important reason for the decline of general academic standard in higher education is that it is being offered so cheap. For maintaining the existing level of equity in higher education, if not enhancing it further, the present system of highly subsidised higher education, with admission on merit/reservation, should continue so that the meritorious and the poor are not burdened with higher fees and thus deprived of higher education because of the unaffordable expenses. However, there is no justification in keeping fee rates low across the board. For achieving overall improvement in quality and raising the level of equity in true sense of the word, the insufficient inputs in the present system leading to poor quality should be augmented by savings from the self financed programmes. It follows, therefore, that those who have the capacity to pay should be entitled to get the type of education desired by them at a price a little higher than what it actually costs to provide it. The net revenue generated by these self-financed programmes can be used to enhance the quality and performance, as well as to introduce the loan scholarships to enable the students of economically backward sections to take advantage of the innovative educational programmes which are
not supported by government. Thus, in effect self-financing introduces innovation and overall modernization, effectively raises the level of equity and reduces the dependence of the system on the government.

A university stands to gain in financial terms if students who desire education on specific lines pay the university more than what it costs to provide that service. However, the introduction of self-financed programme in a university may lead to adverse reactions among all – teachers, students and the parents (guardians). Group interests and vested interests may try to take advantage of the situation of high fee and may oppose it. They will raise a hue and cry that universities are being made 'shops' for raising money instead of retaining them as temples of learning, and thus emphasis, they will claim, is being shifted from academic to financial matters and that social justice is being compromised. There may be many more politically motivated criticisms of this programme as political parties are often opposed to each other and try to defame or undo the work of each other. Therefore the introduction of self-financed academic programmes have to be preceded by a well-planned publicity exercise to avert misunderstanding. It must be clear to all those who are in any way concerned with higher education that:

a) In view of the present financial constraint on the universities, new academic programmes are not at all possible except on a self-financed basis.

b) If self-financed programmes are not available at the university, those students who can afford such self-financed innovative courses can join such programmes elsewhere and in case it should be abroad, it will put an additional demand on foreign exchange, the situation of which is already precarious.

c) These new programmes will assist in the overall development of the university.
d) A self-financed programme is an effective means to innovative educational experiment.

e) All teachers and students stand to gain from strengthening of the infrastructure made possible by such programmes and the improved infrastructure, in turn, will generate immense goodwill for such programmes as well as for the organizing university.

f) There will be no curtailment of seats / facilities in existing courses due to the introduction of self-financed innovative programmes.

g) Self-financed programmes will lead to a lessening of financial dependence on the government and hence will ensure greater autonomy for the university.

The recent guidelines of the UGC (mentioned in Chapter VI) whereby half of the seats in existing programmes can be high-fee seats and NRI seats, may be considered as a booster. Supreme Court decisions have given support to self-financing courses or sponsored programmes of various types. So there are no legal hurdles.

Another avenue of generating funds for higher education is through exporting education. Excellence in teacher combined with the ability to tailor educational programmes to suit the clients and good marketing can elicit sufficient demand abroad and corresponding financial support. Our neighbouring countries and other developing countries in many parts of the world can benefit from the expertise that is generated here in this State or country. In this context, we may have the following type of projects:

i. Assistance in setting up or running educational programmes at established educational institutions.

ii. Setting up, on turnkey basis, an educational or training establishment.

iii. Taking up projects in collaboration with developed countries, for instance, arranging instructions for two years bachelor’s programmes in
a developing country followed by two years postgraduate programme in a developed country.

iv. Setting up a professional institute which is recognised by the host country, with Indian / other's investment with full / part ownership. If necessary the degree may be given by a university in India. Australian universities offer such programmes in Singapore.

(a) Fee for Foreign Students

All universities in the country as in the State of Uttar Pradesh are of the view that foreign students be asked to pay substantial higher fee and this is the source which all universities are trying to use to the fullest possible extent. Their education is now not going to be subsidized in universities on the ground that this is not the practice all over the world, and that most foreign students, in any case, come on government scholarships. There is a general tendency to hike fee for foreign students. The Indian Institutes of Technology for instance, have hiked undergraduate fees from $100 to $2000 per semester and those for postgraduate courses from $200 to $3000. Aligarh Muslim University decided to charge $4000 for a Master’s programme in Business Administration, and $300 to $500 for arts and science graduation programmes respectively. Pune University has decided to levy $500 as entrance fee alone. These fee structures are very close to what is charged from foreign students in universities of Uttar Pradesh. For example, foreign students in Lucknow University have to pay $2000 for undergraduate management courses per year. Thus enhanced fee for foreign students has made State universities virtually private universities.

(b) Financial Support from Industry

Among the sources of non-government funds, industry, which is the user of manpower trained by universities, can be induced to collaborate with research activities in the universities. Kurukshetra University, for instance, has created a cell for developing liaison with industries. A prominent electronic industry has proposed to collaborate with the Electronic Science Department and the
University Instrumentation Centre to develop sophisticated instruments. In another instance a plastic industry has offered collaboration with the Department of Chemistry to help improve the quality and finishing of their plastic products. Such types of collaborations can be encouraged in universities in Uttar Pradesh to relieve them of some burden of financing research programmes in different disciplines. However, in U.P. its role has been almost negligible. Only Hi-tech areas industry can be fruitfully offered consultancy services especially universities located in and around industrial belts, while laboratories can be made to pay by carrying out chemical analysis, pollution monitoring, etc., for industry. But there is growing amount of distrust between industry and universities and this barrier needs to be broken. In many instances in U.P. when industrial units were contacted by the university, it was found that small-scale units only wanted to know what the university could do for them without wanting to pay for it. When Calcutta University in West Bengal invited the West Bengal Chambers of Commerce and Industry, it did not respond to the vice-chancellor’s call. In fact, the industries as such do not regard higher education as a productive social investment.

(c) Others

Mobilization of additional resources independent of government support for universities can also be attempted through ‘sponsored research and consultancy’. There is plenty of scope for expansion of these activities in most universities. Faculty members in departments of Management, Engineering (all branches), Chemistry, Commerce, etc., may also be encouraged to bring in research projects and consultancies. Institutions of higher education may undertake production of materials and services which they can produce cheaper and better. Universities may start publishing-houses of their own for publication of books and journals. Since university faculty provides the largest authorship of

26 *University News*, May 31, 1993
books released each year, the profits from which go to private publishers, if universities singly or in collaboration establish publishing houses, then apart from the copyright remaining with the faculty members, the university may also earn a profit for themselves. News and feature magazines and even newspapers may be started by universities. It is often their faculty who constitute the leading columnists in Newspapers and magazines published by the private sector.

Endowments and gifts form a negligible source of finance for higher education. However, this is an important source whose potential has not been fully explored for making important contribution towards financing of higher education. There are numerous instances where well-settled alumni have contributed generously towards specific programmes in their alma mater. Industrialists, businessmen and wealthy people, when approached by authorities, have helped with donations for specific purposes such as construction of halls, special wards in hospitals, extension of libraries, hostels for students and the like. Though this cannot be regarded as a reliable source of finance it cannot be ignored either.

While discussing the ways and means for raising the ‘domestic’ or own resources of universities, we do not mean that government should take its “hands off” from financing the institutions of higher learning. Higher education even in several advanced countries still remains largely a State supported sector. In India continuation of government support to higher education is much more important when we also have to achieve social justice in providing higher education.

A more rational and equitable reorganization of government funding of universities in India is urgently called upon. Objective criteria based funding of the universities and colleges is called for by the government in order to reduce subjective or political discretion in allocation of grants. The criteria based funding as it exists in Britain is a good example for India to emulate.

In India, it has also been suggested at the 67th vice-chancellor’s conference held at Pondicherry that maintenance grants to every university must be provided
for by the government. To ensure this, a special finance commission must be constituted to take into account minimum needs of universities.

Thus, for solving the financial crisis in higher education a two pronged strategy is needed:

i. The existing system of government funding needs to be rationalized, made more effective and equitable, and

ii. Each university as an individual firm should look for other options to evolve its own programmes of generating funds so that it gradually emerges as a professional university.

This is precisely the system towards which higher education system of the State will move slowly but surely in the time to come.

Summary and Conclusions

Higher education in Uttar Pradesh is passing through a grave financial crisis as in other parts of the country.

With the adoption of the new economic policy, government has withdrawn from a number of activities. As in other sectors of the economy, in the sector of education, especially higher education, greater private sector participation is being promoted. Faced with huge fiscal deficit, the government is resorting to heavy cuts in expenditure on higher education, which has increasingly come to be considered a non-merit good.

Higher education is being planned to be subjected to the market mechanism with emphasis on greater use of fees for providing it. A discriminatory fee structure, keeping in view the ability to pay, is being advocated.

The other view, however, is, that the State must continue to support higher education, a merit good. At the same time efforts should be made by institutions to raise their own resources.
Dwindling internal resources of higher educational institutions and lower increase in public funding than commensurate with needs on the one hand, and ever-increasing demand for higher education on the other has led to an urgent need of additional resources mobilization.

Traditionally higher education has been left out of price theory (being considered a social good), but now, when it is competing for an increasing share in the government budget, various aspects of it — demand, supply, resources, costs, etc., - are being examined in a different light.

Assured salaries and absence of monitoring system together with financing primarily by the government has rendered the production of educational services in institutions of higher learning, inefficient. Wherever private participation is substantial, better results have obtained.

From the viewpoint of additional resource mobilization, the system based on the market mechanism is gradually gaining ground.

However, in the higher education sector (as in rest of education) the basic rules of economic theory are flouted in that:

(a) Consumers are not the buyers
(b) Producers are not the sellers, and
(c) Financiers are not the controllers.

Therefore, price is not determined by the market forces. Unlike other sectors where market mechanism prevails, in higher education prices are not allowed to rise despite increased demand.

It is felt that the most important factor that is responsible for financial crisis in higher education and consequent search for additional resource mobilization is that it does not adhere to the principles of economic theory.

The above mentioned factor is also responsible for the mushroom growth and the efficient running of private higher (professional) institutions and teaching institutions.
An attempt is made to project the requirement of finance in U.P. over the next ten years, based on expected increase in enrolment and in costs over the same period. Two alternative considerations of enrolment are based on:

(a) Trend rate of growth in enrolments in higher education in Uttar Pradesh. For the degree colleges the growth rate during 1990-91 to 1998-99 and for universities 1980-81 to 1990-91 has been considered.

(b) The assumption that by the year 2010, in U.P. almost 15 percent of the higher education age-cohort population will join the higher education institutions.

The first estimate (P1E) projects enrolments by 2009-10 at 21.03 lakhs, while the second estimate (P2E) are a little higher at 33.40 lakhs. The projected enrolment ratio for universities is 19 percent for 1999-2000 and it is expected to reduce to 15 percent by 2010 (second estimate).

Similarly there are two alternative cost-projections of higher education in U.P.:

(a) P1C – based on the trend rate of growth of 1979-80 to 1993-94, and
(b) P2C – based on the assumption of 10 percent price rise per year.

The first projection of cost (P1C) for 1999-2000 is Rs.500 crores, which gradually increases to Rs.1156 crores in 2009-10.

The second projection of cost (P2C) for 1999-2000 is Rs.843 crores, which increases to Rs.4723 crores. Both the projections are made on the base-year 1993-94.

The projections of costs divided by projected enrolments give the projected per pupil cost in higher education in U.P. Thus we have four alternative sets of data: P1C/P1E, P1C/P2E, P2C/P1E, and P2C/P2E. In the first projection of per pupil cost (P1C/P1E), costs rise by 35 percent, from Rs.4048 to Rs.5497. In the second projection (P1C/P2E) costs actually fall by 6 percent from Rs.3681 to Rs.3461. In the third projection (P2C/P1E), costs per pupil increases by 228 percent from Rs.6854 to Rs.22458. This is in fact the highest projection of per
pupil cost based on the assumption of 10 percent inflation during the period and trend enrolment for the period under consideration. In the fourth projection (P₂C/P₂E), costs increase by 127 percent from Rs.6231 to Rs.14141.

Projections of per pupil fee have also been made and are based on:
(a) 35 percent of burden on the student in the form of fee
(b) 50 percent of burden on the student in the form of fee
(c) 60 percent of burden on the student in the form of fee

If the basis is taken to be P₁C/P₁E then the respective increases in projected per pupil fee over the period 1999-2000 and 2009-10 will be:
(a) With 35 percent of burden on students — from Rs.1417 to Rs.1924.
(b) With 50 percent of burden on students — from Rs.2024 to Rs.2748.
(c) With 60 percent of burden on students — Rs.2429 to Rs.3298.

If the basis is taken to be P₁C/P₂E then the respective increases in projected per pupil fee over the period 1999-2000 and 2009-10 will be:
(a) With 35 percent of burden on students — from Rs.1288 to Rs.1211.
(b) With 50 percent of burden on students — from Rs.1840 to Rs.1731.
(c) With 60 percent of burden on students — from Rs.2208 to Rs.2077.

In all the three cases projected per pupil fee declines because they are all based on P₁C/P₂E, which shows a decline in per pupil projected costs.

If the basis is taken to be P₂C/P₁E then the respective increase in projected per pupil fee over the period 1999-2000 and 2009-10 will be:
(a) With 35 percent burden on students, from Rs.2399 to Rs.7860.
(b) With 50 percent burden on students, from Rs.3427 to Rs.11229.
(c) With 60 percent burden on students, from Rs.412 to Rs.13457.
In the fourth alternative based on $P_2C/P_2E$, projected per pupil fee will increase as follows:

(a) With 35 percent burden on students, from Rs.2181 to Rs.4949
(b) With 50 percent burden on students, from Rs.3115 to Rs.7070
(c) With 60 percent burden on students, from Rs.3738 to Rs.8484.

Projected increases in public expenditure between 1999-2000 to 2009-10 based on first projection of costs ($P_1C$) will be:

i. With 40 percent of burden on government, from Rs.199 crores to Rs.462 crores.
ii. With 50 percent burden on government, from Rs.249 crores to Rs.578 crores.
iii. With 65 percent burden on government, from Rs.329 crores to Rs.751 crores.

Projected increase in public expenditure between 1999-2000 to 2009-10 based on the second projection of costs $P_2C$ will be:

i. With 40 percent burden on government, from Rs.337 crores to Rs.1889 crores.
ii. With 50 percent burden on government, from Rs.422 crores to Rs.2362 crores.
iii. With 65 percent burden on government from Rs.548 crores to Rs.3070 crores.

Which of the above options are put into practice has yet to be determined. While it is true that fees are too low and an upward revision is imminent and to quite an extent desirable, most people are still of the opinion that government must continue to bear greater part of the burden.

Self-financed programmes in the private sector have been quite successful. The same can be adopted by the government colleges and universities. Resources
generated by such programmes can be used for improving quality and for modernization. At the same time dependence on government for funds will be reduced.

Another measure for generating more funds can be by exporting education to other developing countries. Additional resources may also be mobilized through sponsored research and consultancy. Institutions of higher education can themselves undertake production of materials and services in various departments in the Engineering and Medical Faculties, department of Business Management, Computer Science, Fine Arts, Journalism, etc. Universities may also set up publishing houses for publication of books and journals.

The strategy for solving the financial crisis must therefore aim at:

I. A more rational government funding,

II. Innovative measures of raising resources.

At the same time, it is important that there must be a better utilisation and management of the resources raised.