Chapter - 9

SUMMARY, MAIN CONCLUSIONS AND POLICY IMPLICATIONS

This chapter sums up the principal findings of the study along with the policy implications which emerge from the analysis. It describes the growth of higher education both the general and professional, socio-economic characteristics of the sampled students and institutes, cost structure of professional education, private cost of education, sources of financing by students and institutions, and cost recovery by the professional institutes of the state. An attempt has been made to explain the basic issues and concerns with suitable contextual back up to enhance its social and policy relevance. Sampling, average, ratio and proportionate techniques have been used to calculate cost and financing levels and structure of unit cost of the professional education in Punjab. The various estimates of costs were based on the data gathered through the primary and secondary sources. For the primary survey, two types of schedules have been used, one for the institutions and another for the students. And, for analysis purposes, 29 colleges/institutes belonging to the various trades/courses and 345 students enrolled in the colleges/institutes were selected by the random sampling technique. And, 2006-07 financial year was used to analyze the costs at three levels (i.e. recurring cost, non-recurring costs and institutional cost), sources of financing, and cost recovery.

9.1 Main Conclusions

Professional higher education sector of the state changed definitely more than the rest of sectors. Changes occurs both in the horizontal and vertical spectrums. In many aspects, the earlier monotony in professional education courses has been taken over by the diversity and vibrancy.

9.1.1 Growth of General Higher Education: In 1971, the state has four universities, viz. Guru Nanak Dev University, Amritsar; Panjab University, Chandigarh; Punjabi University, Patiala; and Punjab Agricultural University, Ludhiana. In total, there were
133 affiliated colleges in the state. Out of which, 36.84 per cent colleges/institutes were located in the rural areas and 63.16 per cent in the urban areas. The number of recognized colleges/institutes increased from 133 in 1971 to 213 as on 31st December, 2005. During 2005, 47.42 per cent colleges/institutes were located in rural areas and 52.58 per cent colleges/institutes in urban areas. Thus, even with the growth of college/institutes over the period of time, the location-wise picture remains by and large the same. It means thereby the urban sector colleges/institutes remained in dominant position. Ownership-wise, at the end of the study period (31st December, 2005), there were 50 government colleges/institutes (23.47 per cent), 125 aided colleges/institutes (58.68 per cent), and 38 private unaided colleges/institutes (17.84 per cent) in Punjab.

University-wise analysis shows that 79 colleges/institutes were affiliated with the GNDU, Amritsar, out of which, aided colleges/institutes dominated with 67.08 per cent (33.96 per cent in rural and 66.04 per cent in urban areas). The respective shares of government colleges and private unaided colleges/institutes were 16.46 per cent (46.15 per cent rural and 53.85 per cent urban) and 16.46 per cent (38.46 per cent rural and 61.54 per cent urban). Further, 70 colleges/institutes were affiliated with the Panjab University, Chandigarh, out of which once again aided colleges/institutes formed the majority with share of 64.29 per cent. The respective shares of government and private unaided colleges/institutes were 20 per cent (71.43 per cent rural and 28.57 per cent urban) and 15.71 per cent (81.82 per cent rural and 18.18 per cent urban). And, 64 colleges/institutes were affiliated with the Punjabi University, Patiala. Out of which 42.19 per cent were aided private colleges (55.56 per cent rural and 44.44 per cent urban), 35.94 per cent government colleges (30.43 per cent rural and 69.57 per cent urban), and 21.87 per cent unaided private colleges (71.73 per cent rural and 28.57 per cent urban). Thus, in overall, the aided colleges/institutes in terms of ownership and urban colleges/institutes in terms of location absorbed the larger share of the higher general education sector in Punjab.
9.1.2 Growth of Professional Education: The state, at present, has seven universities providing professional education in the state. Out of these, two were deemed universities, viz. Lovely Professional University, Jalandhar and Thapar University, Patiala. In 1971, the state had 13 professional institutes of different trades/courses. Their number rose to 19 in 1991, to 106 in 2001, to 184 in 2005. It shows that there was nearly 10 times increase in the number of professional colleges/institutes between 1981 and 2005. Thus, the increase in number of institutions was quite large in the post-reforms period (1991-2005) compared to the pre-reforms period (1971-1991).

9.1.3 Loosing Government Dominance and Growing Private Initiative in Professional Education: The analysis shows that the growth of government professional colleges/institutes in the state was very low as the number of such colleges/institutes rose from just 8 in 1971 to 21 in 2005. It shows that only 13 new state owned colleges/institutes were added during the past 34 years (1971-2005). Moreover, it is important to note that, in the six trades, viz. Homeopathic, Physiotherapy, Architecture, MBA, MCA and Law courses, the government contribution was found to be nil. Further, it has been noticed that due to the lack of sufficient funds for creation of infrastructure in professional education in the government’s budget, the private players entered in the professional education in a big way and over-powered the educational market of the state, particularly after the economic reforms period. For instance, the number of private colleges/institutes in the professional trades/courses was just ten in the pre-reforms period (1991). The number rose to 86 in 2001 and to 163 in 2005. It means that 76 new private colleges/institutes were added during the decade of 1991-2001 and 97 during the short period of 2001-2005. Thus, it is clear that private initiative grew at the faster rate during the post-reforms period.

Further, with the establishment of two new universities in the state, i.e. Punjab Technical University (PTU), Jalandhar (1997)) and Baba Farid University of Health Sciences (BFUHS), Faridkot (1998), professional education has got a fillip. As a result, many new profession education colleges/institutes began to affiliate with these
new universities. Up to 2005, 115 colleges/institutes (67.25 per cent) were affiliated to the PTU and 56 colleges/institutes (32.75 per cent) affiliated to the BFUHS were providing professional education courses in various streams. However, 13 Law colleges/institutes in the state (another important category of professional trades/courses) are still affiliated with the traditional universities of the state. Thus, the share of government sector in the professional education colleges/institutes was just 15.22 per cent as compared to 84.78 per cent of the private sector. Moreover, by 2005 (31st December), 65 professional colleges/institutes (35.33 per cent), all under the private ownership, were located in rural areas and 119 (64.67 per cent) in urban areas. Out of 184 colleges/institutes, 20.17 per cent were owned by the government and 79.13 per cent under unaided private ownership category.

9.1.4 Students Enrollment, Teachers and Social Base in Professional Education:
In courses affiliated to the BFUHS, during 2005-06, number of students enrolled was 10,684 across all courses. Male students constituted 31.09 per cent and female students 68.91 per cent. Among them, the proportionate share of SC students was 14.48 per cent (17.58 per cent in the case of SC boy students and 13.07 per cent in the case of SC girl students). Similarly, proportionate share of SC teachers in total number of teachers employed in the medical education courses was just 3.15 per cent. On the other hand, in courses affiliated to the PTU, during 2005-06, number of students enrolled was 26,892 in all courses. Male students constituted 76.91 per cent and females students 23.09 per cent. Among them, the proportionate share of SC students was 6.62 per cent (7.10 per cent in the case of SC boy students and 5.01 per cent in the case of SC girl students). Similarly, proportionate share of SC teachers in total number of teachers employed in the medical education courses was just 2.20 per cent.

9.1.5 Characteristics of Sampled Students: Out of total 345 sampled students belonging to different trades/courses, 47.25 per cent were male students and 52.75 per cent were female students. Out of total eleven courses (Engineering, Architecture, MBA, MCA, Law, Pharmacy, Medical, Dental, Ayurvedic, Physiotherapy and
Nursing), the male students dominated in the Engineering, Architecture and Law courses; the female students formed their majority in the Nursing, Medical and Dental courses; and in the rest of courses, they were nearly evenly distributed. Further, 90.43 per cent students were enrolled in the courses whose duration was either four or four plus year. Further, 44.35 per cent of the total sampled students were studying in Part I 24.06 per cent Part II of the various courses. Similarly, 45.51 per cent of the total students were in the age group of 19-20 and 25.51 per cent in age group of 21-22 years.

Religion-wise, 62.61 per cent and 33.62 per cent of the total sampled students belonged to the Sikh and Hindu religions respectively. Caste-wise, 82.90 per cent students belonged to the high castes category. And, 85.80 per cent students got admission in various courses against the general category seats. It is important to note that the proportionate share of SC/ST students out of the total sampled students was just 6.96 per cent. Location-wise, 82.32 per cent students come from the cities/towns. Only 4.93 per cent students were passed their matriculation or plus two or both examination from rurally located schools. Further, 61.74 per cent students belonged to Punjab state. 79.13 per cent students were staying in the hostels and 96.34 per cent of such students preferred to stay in institutional hostels. As far as the daily commuter students (20.87 per cent) were concerned, 58.33 per cent students travel by bus/train.

The analysis of educational background shows that the majority of the students have passed their school education from the urban schools, viz. at the primary level (88.64 per cent), middle level (89.93 per cent), matriculation level (95.01 per cent) and 10+2 level (96.29 per cent). Regarding the board affiliation, 51.01 per cent students have passed their matriculation examination and 46.63 per cent their senior secondary school examination from the schools affiliated to the CBSE. Gender-wise, 50 per cent of female students and 42.21 per cent of male students have passed their matriculation and 10+2 examinations from the CBSE. Ownership-wise, 80.29 per cent students have passed their matriculation examination and 76.19 per cent their 10+2 examination from private-unaided schools.
Moreover, an overwhelming majority of sampled students got first division in the matriculation and 10+2 level examinations. Interestingly, very few female students got above 90 per cent marks in their 10+2 examination. Further, about 90 per cent students opted for English as the medium of examination and instruction at the matriculation level. And, 98.21 per cent students opted for English as a medium of examination and 96.10 per cent as a medium of instruction at 10+2 level examinations. And, majority of the parents of sampled students were well educated as the proportionate share of parents with graduate and post-graduates and above level of education was quite high across the boy and girl students.

With regard to the economic status of parents of students, the analysis shows that the majority of students (73.33 per cent) come from the families having sources of income other than agriculture. About 27 per cent of the students belong to the families who have land holdings. Size of the land holding was semi-medium (5.1 acre to 10.00 acre) category. And, 45.50 per cent of the sampled students who joined the professional courses did not have any asset base, but came from the families engaged in the service oriented occupations. A very little portion of students’ households (5.51 per cent) were involved in the cultivation (agriculture) for their livelihood. About one-third of students (32.75 per cent) belong to the families who have asset base in the form of factory premises and shop/business premises.

9.1.6 Characteristics of Sampled Institutions: In the courses affiliated to PTU, on the whole, a little less than two-third of teaching staff of engineering courses (65.85 per cent) was found to be working on regular/permanent basis, followed by those employed on adhoc/temporary basis (25.30 per cent) and 8.84 per cent teaching staff fell in the category of ‘others’. In non-engineering courses (Architecture, MBA/MCA and Pharmacy together), a little more than one-half of teaching staff (53.38 per cent) was working on the regular/permanent basis and the rest fell in the category of either adhoc/temporary or others. In the Law course, 52.63 per cent teaching staff was working on the regular/permanent basis.
Similarly, in the course affiliated to the BFUHS, on the whole, 73.54 per cent teaching staff was working on regular/permanent basis. However, the proportion of permanent teaching staff was somewhat different across the various medical streams. For instance, regular/permanent teaching staff constituted 84.58 per cent in the Medical, 78.13 per cent in Dental, 70.37 per cent in Ayurvedic, 55.56 per cent in Nursing, and 40 per cent in Physiotherapy courses.

However, in non-teaching category, all the posts, except the administrative ones, were not filled on regular/permanent basis instead non-regular modes were employed quite frequently, particularly in the lowest categories of employees. For instance, in the PTU’s colleges, 43.84 per cent of non-teaching staff were working on regular/permanent basis, 23.11 per cent on adhoc/temporary basis and 33.05 per cent on other modes. Similarly, in the colleges/institutes affiliated to the BFUHS, on the whole, 41.11 per cent non-teaching staff were working on regular/permanent basis, 37.17 per cent on adhoc/temporary basis and 21.72 per cent belonged to other categories.

Since the teacher-student ratio is a factor of great importance in determining the quality and unit cost of education, it was found to be the highest in the Engineering courses (1:23), followed by the Law course (1:17), MBA course (1:16), MCA course (1:12), Architecture course (1:11) and Pharmacy course (1:10). Among the medical streams, the teacher-student ratio was quite low as is in the case of Medical course (1:3), followed by the Dental course (1:6) and Ayurvedic course (1:8). However, in the Nursing, it was 1:12 and for the Physiotherapy 1:16. However, if one worked a regular/permanent teacher vs. students’ ratio, then it went high across all the professional courses, except the Medical and Dental courses.

9.2 Cost, Financing and Recovery Analysis

The analysis of unit cost of education has been made for its four categories, viz. recurring cost, non-recurring cost, institutional cost and private cost of education, i.e. cost of education borne by students while acquiring it. The cost estimates for 2006-07 have been made separately for the PTU affiliated and BFUHS affiliated
courses. The analysis of cost data shows that the institutions were spending on numerous activities for supplying of education in the case of recurring and non-recurring costs. For recurring cost, more than 50 different typed of items were clubbed into 14 components. These components are: (1) Teaching Cost (TC); (2) Office and Administration (O&A); (3) Electricity and Fuels (E&F); (4) Repair and Maintenance (R&M); (5) Conduct of Examinations (CoE); (6) Extra Mural Activities (EMA); (7) Expenditure on Communication (EoC); (8) Purchase of Consumable Items (PoCI), (9) Transport (T); (10) Legal Expenses (LEX); (11) Expenditure on Research and Faculty Improvement (ER&FI); (12) Publicity (P); (13) Scholarships and Fee Concessions (S&FC); and (14) Miscellaneous Items (MI). And, for non-recurring cost, six main components like the (i) building; (ii) furniture items; (plant and equipment); (iv) books; (v) transport and (vi) others were taken into account.

9.2.1 Recurring Cost

**PTU-Affiliated Courses/Institutions:** Per unit recurring cost for the five trades/courses (Engineering, Architecture, MBA, MCA and Pharmacy) and the Law course which is affiliated to the other universities of state was as follows: Engineering (Rs. 28,657); Law (Rs. 26,389); Pharmacy (Rs. 23,048) MBA (Rs. 22,909); Architecture (Rs. 17,653); and MCA (Rs. 15,258). Among the various components of recurring cost, the teachers’ cost constituted the highest proportion across all the trades. On an average basis, teachers’ cost constituted 40.57 per cent of the total recurring cost. However, its share varied between 35.68 per cent and 45.62 per cent across the different courses. Besides teachers’ cost, office and administration; purchase of consumables; electricity and fuels; and expenditure on communication emerged (in order of importance) as the next important components of the recurring cost.

**BFUHS-Affiliated Courses/Institutions:** Per unit recurring cost for the five trades/courses affiliated with the BFUHS are the Medical, Dental, Ayurvedic, Physiotherapy, and Nursing. Overall, per unit recurring cost worked out to be Rs 84,754. Across the different courses, per unit recurring cost was as under: Medical
(Rs. 1,37,031); Dental (Rs. 1,26,446); Ayurvedic (Rs. 73,190); Nursing (Rs. 44,748); and Physiotherapy (Rs. 42,357). Among the various components of cost, the teachers’ cost constituted the highest proportion across all the trades except the Nursing course. On an average, teachers’ cost cornered 51.51 per cent of the total recurring cost. However, its share varied between 50.24 per cent and 56.56 per cent across the various courses. But, in the Nursing course, the teachers’ cost constituted 29.27 per cent. Besides teachers’ cost, repair and maintenance; office and administration; and purchase of consumables shared the highest proportion of recurring cost across all courses.

Thus, the analysis based upon the different components of recurring cost lead to the acceptance of the first hypothesis of the study which states that the teachers’ cost constitutes the dominant proportion of the recurring cost across the various trades/courses. Moreover, both in the case of the PTU and BFUHS affiliated colleges/institutes, out of the total recurring cost, the share of scholarships and fee concessions was found to very low. For instance, it was 1.30 per cent in the cast of PTU courses and it was 0.74 per cent in the BFUHS courses. Thus, the second hypothesis of the study that the professional institutions are not fulfilling their social obligations by spending no worthwhile amount on stipends, free ships, and meritocratic fellowships, etc. stands accepted.

**9.2.2 Non-Recurring Cost**

**PTU-Affiliated Courses/Institutions:** Per unit non-recurring cost was worked out as follows: Architecture (Rs. 19,595), MBA (Rs. 16,768); Pharmacy (Rs. 16,178); Law (Rs. 15, 442); Engineering (Rs. 13,492); and MCA (Rs. 9,727). Among the various components of cost, building cost constituted the highest proportion across all the trades. On an average, proportionate share of the building was the highest (77.65 per cent), followed by the furniture and fixtures (8.44 per cent), plant and equipment (6.08 per cent); books (4.97 per cent); transport equipments (2.67 per cent); and others (0.18 per cent). Thus, in the PTU courses, the building cost was quite high. This may be because of large amount of investment was made in the
building. Further, investment involved in building and furniture together constitute 86 per cent of total non-recurring cost of PTU courses. Overall, its share varied between 60.72 per cent and 90.65 per cent across all the trades/courses. Thus, furniture and fixtures emerged as the second largest component of non-recurring cost.  

**BFUHS-Affiliated Courses/Institutions:** Per unit non-recurring cost of the trades/courses of institutions affiliated with BFUHS was as follows: Medical (Rs. 14,730); Dental (Rs. 11,718); Nursing (Rs. 11,315); Physiotherapy (Rs. 3,216); and Ayurvedic (Rs. 3,094). In the Medical, Dental and Nursing courses, plant and equipments constituted the highest proportion of per unit non-recurring cost (58.43 per cent, 59.64 per cent and 51.75 per cent respectively). However, in the Ayurvedic and Physiotherapy courses, the building cost constituted the highest proportion (41.11 per cent and 54.85 percent respectively). Thus, on average basis, plant and equipment were absorbing the highest share of non-recurring cost (51.71 per cent), the proportionate share of rest of the components were as follows: building cost (23.97 per cent); books (11.97 per cent); furniture and fixtures (11.89 per cent); transport equipments (0.35 per cent); and others (0.11 per cent). So, besides plant and equipment and building cost, the furniture and fixture and books emerged as the next important components of non-recurring cost in the courses affiliated to the BFUHS.  

**9.2.3. Institutional Cost**

The overall per unit institutional cost was found to Rs. 62,997 across all eleven courses. Out of which, recurring cost was equals to Rs. 50,699 and non-recurring Rs. 12,998. The institutional cost was the highest in Medical Courses (Rs.1,51,761), followed by Dental (Rs.1,38,164); Ayurvedic (Rs. 76,284); Nursing (Rs. 56,063); Physiotherapy (Rs. 45,773); Engineering (Rs. 42,149); Law (Rs. 41,831); MBA (Rs. 39,677); Pharmacy (Rs. 39,226); Architecture (Rs. 37,248) and MCA (Rs. 24,985). The proportionate share of recurring and non-recurring cost vary considerably among the trades/courses. The share of recurring cost was higher than that of non-recurring cost in the ten trades/courses, viz. Engineering, MBA, MCA, Law, Pharmacy, Medical, Dental, Ayurvedic, Physiotherapy and Nursing.
Their respective shares of per unit recurring cost out of in the per unit institutional cost was 67.99 per cent, 57.74 per cent, 61.07 per cent, 63.08 per cent, 90.29 per cent, 91.52 per cent, 95.94 per cent, 92.94 per cent and 79.82 per cent respectively. However, in the case of Architecture, the proportionate share of per unit non-recurring cost was higher (52.61 per cent) compared to per unit recurring cost (47.39 per cent).

9.2.4 Private Cost of Education to Students

Private cost is defined as that cost of education, which is being incurred by the students or their parents or both. The various types of costs have been clubbed under six headings: (a) fees and funds; (b) books, stationery and photocopy; (c) cloth and garments; (d) mobile/telephone; (e) canteen and (f) others. And in the case of students living in the hostels, hostel expenses have been divided into two categories, viz. (a) hostel charges and (b) mess charges.

Private Cost of Education to Students of PTU: Per student private cost of education was found to be the highest in the case of MBA course (Rs.114,095) and the lowest in the case of Law course (Rs.58,482). Per student private cost in the case of rest of the courses was as follows: Architecture (Rs. 103,383); Engineering (Rs. 96,546); MCA (Rs. 96,555) and, Pharmacy (Rs. 94,376). It is important to note that, fees and funds constitute the overwhelming proportion of the private cost of education across the courses. Its share ranges between 60.56 per cent and 80.22 per cent. On an average, the share of various components into the overall private cost of education was as follows: fees and funds (70.18 per cent); cloth and garments (10.87 per cent); books, stationery and photocopy (7.37 per cent); canteen (5.22 per cent); mobile/telephone (3.76 per cent); and others (2.60 per cent).

Hostel and Mess Bill: In the case of colleges/institutes of PTU, a student availing of the hostel and mess facility, on an average, has to spend Rs. 39,621 per academic session. Out of this, hostel payments were Rs.20,230 (51.06 per cent) and mess charges Rs. 19,391 (48.94 per cent). Per student spending on hostel and mess was the highest in the case of MCA course (Rs. 46,455) and the lowest in the case of Law
course, i.e. Rs. 33,666. The share of rest of courses was as follows: Architecture (Rs. 40,000); MBA (Rs. 40,963); Pharmacy (Rs. 39,625) and Engineering (Rs. 37,021). The proportionate share of hostel charges in the total hostel and mess charges was between 51.06 per cent and 48.94 per cent across the various courses.

**Private Cost of Education to Students of BFUHS:** Per student private cost of education in the BFUHS affiliated institutions worked out to be Rs. 112,110 per annum. The share of various components in this was as follows: fees and funds (75.89 per cent); books, stationery and photocopy (6.22 per cent); cloth and garments (6.92 per cent); mobile/telephone (2.44 per cent); canteen (5.07 per cent); and others (3.45 per cent). Per student private cost of education was found to be the highest in the case of Medical courses (Rs. 192,075) and the lowest for Physiotherapy (Rs. 51,467) per annum. The share of rest of the courses was as follows: Dental (Rs. 145,931); Ayurvedic (Rs. 99,578); and Nursing (Rs. 71,499).

**Hostel and Mess Bill:** In the case of colleges/institutes affiliated with BFUHS, a student availing the hostel and mess facility, on an average, has to spend Rs. 35,491. Among them, the hostel charges were Rs. 19,256 (54.26 per cent) and mess charges Rs. 16,235 (45.74 per cent). Per student spending on hostel and mess was the highest in Medical courses (Rs. 57,505) and the lowest in Physiotherapy course (Rs. 24,700). In other courses, per student spending on this item was as under: The Dental (Rs. 42,000); Nursing (Rs. 27,224); and Ayurvedic (Rs. 26,028).

**9.2.5 Financing by Students**

The analysis of economic background of sampled students pursuing the professional education in the state is very important in order to understand to which economic strata or class of the society, they represent. The results are based upon the information supplied by the students themselves. The primary survey, in total, included 345 students. In the absence of state finances in the form of grants/subsidies (fee concessions and scholarship), the question ‘who bears the students’ study expenditure’ has assumed greater importance, particularly in the case of higher professional courses. The data show that more than 82.90 per cent students depend upon their parents for financing their study followed by parents/scholarship 2.61 per
cent; uncle/relatives 2.61 per cent; parents/fee concession 1.45 per cent; and foreign remittances 1.16 per cent. Similarly, the higher proportion of girls 156 (85.71 per cent) and boys 130 (79.75 per cent) were dependent on parents for financing their study. In this way, the third hypothesis of study that the students depend primarily on their parents to finance their education have been verified.

9.2.6 Financing by Institutions

Financing by Institutions of PTU: With regard to the financing sources in the case of institutions affiliated with PTU, an assessment of the data concludes that fees and funds were the only source of income of sampled institutions. Trade-wise, it was the MBA course in which per unit collection was the highest (Rs. 84,900). Further, per unit collection from other courses/trades was as follows: Engineering (Rs. 70,130); Architecture (Rs. 63,340); MCA (Rs. 83,220); Law (Rs. 37,610) and Pharmacy (Rs. 70,180). Out of various sources of financing, fees and funds constitute almost more than 99 per cent share in all the trades/courses. Thus, fees and funds is the only source of income of these colleges/institutes.

Financing by Institutions of BFUHS: As far as the sources of financing by institutions affiliated with BFUHS are concerned, per unit collection was the highest in the Medical course (Rs.1,52,210) followed by Dental (Rs.1,39,225); Ayurvedic (Rs. 87,325); Physiotherapy (Rs. 68,728); and Nursing (Rs.57,680);. **In calculating per unit collection, charges paid by patients in the hospitals attached with medical sciences colleges were not considered as part of per unit financing.** Per unit collection from the students was the only significant sources of financing in all of these professional courses. Contributions made by the voluntary sources was very negligible (1.49 per cent) in the nursing courses. Thus, the fees and funds was the overwhelming source of financing of the institutions. Like, PTU courses, in Medical courses also, fees and finds constituted more than the 90 per cent across all medical courses. Thus, the fourth hypothesis of study that is the professional institutions have not tapped the non-student and non-government sources to finance has considerably been accepted.
9.2.7 Cost, Financing, and Recovery

To get the clear picture of cost recovery by the educational enterprises, percentage shares under four heads have been taken into account: recurring cost to receipts, non-recurring cost to receipts, institutional cost to receipts and fees and funds to receipts.

PTU-Affiliated Courses: The analysis of cost recovery shows that its level was quite higher. Overall, average receipts of the courses affiliated to PTU was estimated to be Rs. 68,230. Cost-wise, average share of total recurring cost to the receipts of PTU courses was 32.71 per cent. Course-wise, in Law course, the recurring cost as proportion of the receipts constituted the larger proportion was 70.16 per cent. Similarly, in the case of non-recurring cost as percentage of receipts, on an average basis, it was estimated 22.28 per cent. The proportionate share of non-recurring cost to the receipts once again was the highest in Law course as it was estimated to be 41.06 per cent. The institutional cost as proportion of receipts was equal to 54.99 per cent. Course-wise, the share of institutional cost to receipts was found to be the highest in Law course (111.22 per cent). In PTU courses, as fees and funds proved the only source of income, estimation of receipts from that side was also very important. The average share of fees and funds to the receipts was estimated 97.28 per cent. Course-wise, in Architecture course, share of fees and funds to receipts was estimated as the highest (98.55 per cent). Thus, on an average, per unit share of fees and funds to the receipts was found to be quite high in the courses run by PTU. While estimating per unit surplus, it was estimated, on per unit average basis, 45.01 per cent were the surplus generated across all the trades/courses run by PTU. It was found to be the highest in MCA course (69.98 per cent). Only, in Law course, losses were found to be 11.22 per cent.

BFUHS-Affiliated Courses: In the case of BFUHS, average receipts were estimated to be equal to Rs. 1,01,034. As far as the proportions of per unit recurring cost, non-recurring cost and institutional cost to receipts were concerned, these were estimated to be 83.89 per cent, 8.72 per cent and 92.61 per cent respectively. Course-wise, recurring cost as a proportion of receipts was found to be highest in Dental course
90.82 per cent. However, the proportion of non-recurring and institutional cost to the receipts was found to be the highest in Nursing and Medical courses (19.62 per cent and 99.71 per cent) respectively. Per unit share of fees and funds to receipts was estimated 84.21 per cent. In Medical course, fees and funds have been shown the highest (98.55 per cent) as a proportion of receipts. As far as per unit surpluses/losses generated by these institutes, it was estimated that 7.39 per cent surpluses were generated in the colleges/institutes of BFUHS. It was found to be highest in the Physiotherapy course (33.69 per cent) and the lowest in Medical course (0.29 per cent).

If we compare the cost recovery structure of the PTU courses and BFUHS courses, it was found that, average per unit surplus was quite higher in PTU courses compared to BFUHS courses. Thus, the fifth and last hypothesis of the study that the professional institutes earn huge profit through the high fees and funds charged from students by supplying of education services stand accepted.

9.3 Policy Implications

The education development experience of world countries establishes beyond any doubt that the quality education with wider access and affordability happens only in the situation of the adequacy of public resources and comprehensive regulatory framework. From the study, it becomes clear that the practices related to fees and funds, recovery of costs, salary of the staff and above all, financing practices demand serious attention of the state.

The state has to decide about the extent and modes of cost recovery. The allowing of full recovery of institutional costs would be socially hazardous step, and ultimately, it will turn out to be a phenomenon not conducive to the economic growth of state. Actually, any act which discourages the building up of quality human capital in the on a larger scale is actually growth reducing in nature. The full recovery of recurring cost from students as has been the case among various trades in the professional education makes the education unaffordable for weaker sections of the society. The present level of fees and funds is very high keeping in view of the level
of per capita income of the state. As per U.R. Rao Committee Report, the fees and funds charged from the students should not be more than 30 per cent of the state per capita income. It is also held that as is the practice in advanced countries, the recoveries from the students should not be more than 20-25 per cent of the recurring cost from the students. The institutions/governments should bear 75-80 per cent of the recurring cost.

The operation of unbridled market forces has generated a direct conflict between cost recoveries and affordability of professional higher education in the state. The level of fees and funds is very high in different trades/courses in the professional higher education. The private institutes providing professional higher education have been found to be generating huge economic surpluses, i.e. receipts were found to be much more than that of costs. Thus, keeping in view, the high cost recovery from professional education, there is a dire necessity to establish an independent regulatory commission with statutory powers and public accountability to determine, control and monitor the fees and funds charged from the students along with the payment of salary to the teaching and non-teaching staff. It is to be noted that the universities and national level regulatory bodies deal with the quality of higher education through the process of academic affiliation and recognition. However, there is hardly any body to monitor the economic interests of students, teachers, non-teaching staff and parents associated with the private players in professional higher education, in one way or the other.

The state should see to it that the private institutions must raise funds from sources other than that of students alone. The institutions had not made much effort in this direction as the contribution of voluntary and professional bodies in their income has remained almost negligible. Further, the state should ensure that the educational institutions must provide prescribed salary along with other incentives to the staff so that the teaching as a profession could attract brighter persons. Further, private institutions in the state have not been doing any worthwhile related to the research specific to engineering and technology. Similarly, private institutions have not been
spending any thing on fee concessions/scholarships for the students. The charging of very high fees and funds from the students may be one of the important factors for the lower proportion of SC/BC students which was just 6.96 per cent of the sampled students. The need is to make higher professional education more inclusive in the state.

The Punjab state has been spending less on education from public resources. In the last decade, public expenditure on higher education declined considerably. Per student expenditure on higher education at real prices has registered negative growth during the last decade. Their is a strong need to increase the public spending on education to the level of six per cent of the state income in a time bound manner, out of which higher education must get its due share. The state has to evolve special mechanism to raise the participation of poor but meritorious students and students belonged to the weaker section of the society in professional higher education. Further, the professional education in some of the important fields such as the Engineering, Medical, Dental, Management, MCA, Law, Pharmacy, Ayurvedic, Physiotherapy and Nursing has become the exclusive domain of private sector. The public provision of education sector in the state in the professional areas must be created to implement the desired programmes like fee concessions/scholarships/free ships or loans and policies related to the weaker and meritorious students and also generate public-private competition. In view of these policy implications, there are several directions in which the research should be extended in future, particularly in the areas of alternative sources of financing, quality improvements, wider accessibility, affordability, and returns (public and private) of higher professional education in the state. Exclusion of students belonging to the weaker sections of society from the benefits of higher professional education is another important area for future research.