Chapter 6 Economics of Education at the Household Level

6.1 Introduction

In this chapter the sample data is analysed to study the relation between different socio-economic features of the households and the different types of expenditures on education. For this purpose, statistical techniques like cross tabulation, Chi-square testing are used (at 5% level of significance). Income of the family, parents’ education, caste, religion, gender, are some of the factors that may influence different types of expenditures on education. What follows is an analysis of the data that explores the possible determinants of expenditure on education.

6.2 Number of Children in the Family and Income Group.

Total 400 hundred households were surveyed. Out of these 47.5% had two children. 61.6% of high income group households had two children. Whereas 32.4% of the low-income group households had two children. Percentage for the lower middle and the higher middle-income groups having two children was 47.4 and 54.7 respectively. 26% families in the high-income group had only one child. Whereas 12% in the low, 14.3% in lower middle and 23.3% in the higher middle-income groups had only one child. 24% of low income group families had four or more children. This proportion declined rapidly in case of higher income groups. It was 12% in the lower middle, 10.5% in the higher middle and only 1.4% in the high-income group. Among all the households taken together 13% (52 households out of 400) had four or more children. Out of these 52 household 26 belong to the low-income group. The association between income group and number of children in the household was tested using chi-square technique.

Null hypothesis: There is no association between income of the household and the number of children in the household.
The Calculated value of chi-square $= 51.977 > \text{The table value of chi-square} = 21.026.$ \ (the p value $= 0.00001 < 0.05$) Calculated value of the chi-square is more than the table value. So, the null hypothesis is rejected. There is an association between income of the household and the number of children in the household. During interaction, some parents said, in a confessional tone, that their desire to have at least one male child is the reason for having three or more children. But some of them were quick to add and said that their desire to have male child does not mean they love their daughters less. They will provide same education facilities to their son and daughters. It is not that they don’t want daughter(s) but they want at least one son. But male preference is not the only reason for having more than two children. In the low-income groups, even after having first male child/children, families continued to have more children. Parents of all income groups having one child, said that it is a deliberate decision as they wish to provide good quality education to their child. Description of good quality education depended on the income group. In case of high or higher middle-income groups it was good quality as per the global standards whereas for the lower middle and low-income groups it was good quality as per the national standards. Some parents belonging to the high-income group, having two children were repenting and said it was a wrong decision, they should have stopped after one child. Ever increasing expenditure on education is emerging as a new birth control measure!

6.3 Income of the Household and Gender Issues

The data collected was analysed to trace the gender bias, if any, in the selection of education programme. The expenditure required for the degree programme depends on two things- 1. the type of the degree programme and 2. Whether the degree programme is government aided or unaided. All types of degree programmes in the aided segment are relatively cheaper compared to that of in the unaided segment. In the aided segment professional degree programmes are more expensive than the general degree programme. This may create gender bias. The gender
bias may also get created due to the socio-cultural norms. Because of the socio-cultural norms female children tend to choose career options that confirm to the stereotypical image of the woman in the society. So, if at all they enter the employment market they tend to get into typical ‘pink jobs’. The Economic Times on 27 August, 2016, reported, “The number of female students in the country’s top B-schools has hit a three-years low despite ongoing efforts of these institutions to shore up gender diversity in classrooms, in what could impact corporate India’s efforts to bring more women to leadership roles… some experts said women could be opting for other courses as there are not many role models…The percentage of women applicants itself is less.” Though number of female graduates is increasing over the years they tend to choose conventional degree programmes and later choose family friendly occupations.

In the last two decades variety in education programmes available in Mumbai has increased. These programmes are self-financing and hence expensive. Even well-established old programmes like engineering are available in the non-aided segments at much higher price. The enrolment of girls in these expensive programmes is observed to be less. The principal of a well-known arts and science college in Mumbai remarked, that his college is almost getting converted into a girls’ college. He said, in case of the Arts faculty, girls were always in the majority. But in case of the science faculty boys normally used to outnumber the girls. But after the advent of the private engineering colleges, almost every male engineering aspirant gets admission in some engineering college or the other. Parents are ready to spend extra amount for the male child and send him to the private engineering /medical (or any other similar programme) college. But girls especially from low and lower middle-income families study engineering/medicine or similar prestigious programme only if they get admission into the government or aided college and that is very tough. So lately even in the general B.Sc. Class, girls outnumber boys. Parents belonging to the higher income groups normally do not discriminate and are ready to spend for their daughters’ education. To test these observations,
degree programmes were categorised as BA, BSc, BCom/BMS (and other similar varieties), Medicine/engineering, ‘any other’.

6.3.1 Male Children: Income Group and Graduation Programme

Null hypothesis: In case of male children income of the household and the type of graduation programme pursued, are not associated.

Calculated chi-square value = 21.758 < Table value of chi-square = 24.996

(the p value = 0.114 > 0.05) So, the null hypothesis is accepted. In case of male children, household income and the choice of degree programme are not related.

Out of 101 male students from low income group 66 (65.35%) were pursuing conventional degree programmes and remaining 35 students (34.65%) were pursuing professional programme/unaided programmes. In case of the high-income group, out of total 43 male children, 24 (55.81%) were pursuing conventional degree programme and 19 (44.19%) children were pursuing professional programme/unaided programmes. Benefits of the affirmative action as part of admission policy get cornered by the male children of the under privileged groups in the society. Admission to the professional /any other prestigious degree programmes is based on the entrance examination. Preparation for these examinations need time and energy and money (for coaching class). Girl children in the poor families tend to get burdened with the household chores. The boys in the poor families are also disadvantaged vis a vis upper income group boy, but they are relatively in better position compared to the girls in their families.

6.3.2 Female Children: Income Group and Graduation Programme
Out of 109 girls from low income group families, 88 (80.73%) were pursuing conventional degree programme and only 21 (19.27%) were pursuing professional/unaided programmes. In the case of the girls from the higher income groups, out of 71 girls, 50 (70.42%) were pursuing conventional degree programme. Remaining 21 (29.58%) were pursuing professional programme/unaided job orienting programmes.

The data for female children was tested as was done in case of male children.

Null hypothesis: In case of female children income of the household and the type of graduation programme pursued, are not associated.

Calculated chi-square value = 33.759 > Table value of chi-square = 24.996

(the p value = 0.004 < 0.05) Table value is less than the calculated value of the Chi-square. So, the null hypothesis is rejected. There is an association between income of the household and the graduation programme chosen by female children.

Female children in the lower income groups are at extra disadvantage than the male children from the same income group. Some of the reasons that were mentioned by the respondents for this bias are-1. Parents need to spend a lot money in the daughter’s marriage.2. Daughters don’t stay with their parents after marriage. So, the fruits of the investment in her education are reaped by her in-laws. These facts apparently indicating economic calculations, have their roots in the overall social backwardness and gender inequality.

All other expenditures like school fees, private tuition expenditures at school and college level, travelling, food, cell phone etc. were tested for the gender bias. But significant results were not observed. Significant gender bias was observed in case of two types of expenditures- the Fees paid at the Higher Secondary Level and the fees paid at the degree college level.

6.3.3 Fees Paid at the Higher Secondary Level, College Level and Gender
As has been observed already, girls tend to choose conventional, affordable degree programme. In most of the colleges in Mumbai conventional degree programmes are in the aided segment and normally their fees are about Rs.5000 per year for the open category. For reserved category students, it is less than Rs.1000. Most of the non-conventional degree programmes are in the unaided segment so the fees of these programmes are high. To get into conventional degree programmes normally students enrol themselves in the same faculty at the HSC level and continue to be in the same college after completing higher secondary.

6.3.4 Fees paid at higher secondary level and Gender

Null hypothesis: Fees paid at the higher secondary level and Gender of the student are not related

Calculated chi-square = 16.526 > Table value of chi-square = 7.851

(the p value = 0.001 < 0.05) So the null hypothesis is rejected There is an association between the fees paid at the higher secondary level and the gender of the student. 70.3% female students studied at the government aided colleges at the higher secondary level where as 59.6% of the male students studied at the government aided colleges. There were 5.1 % of boys, who paid Rs 50000 or more as fees at the HSC level. There were only 1.5% girls in this category.

6.3.5 Fees paid at the Degree College Level and Gender

Null hypothesis: Expenditure on the Degree College fees and gender of the student are not related

Calculated chi-square = 8.449 > Table value of chi-square = 7.815
(the p value = 0.038 < 0.05) So the null hypothesis is rejected. Expenditure on the college fees paid by the girls and boys differs significantly. This difference is more pronounced at the upper end of the fee structure. 12.95% of the male children were paying Rs.50000 or more as their college fees. Whereas 7.2% of the female children were paying fees in the same range.

6.4 Ranking of Expenditure on Education in the Family Budget

The household expenditures can be broadly categorised under different headings such as food, clothes, education, servants etc. (Description given in the Chapter 5) the first rank given to a specific category means the highest expenditure on that category. The three ranks were considered. The first, second and third or below third. The first rank indicates the highest expenditure on education in the family budget. The rank indicates the importance of education expenditure in the total family expenditure. The higher rank may be because of two reasons: 1. the household considers education as the priority while allocating finance for various expenditure heads. 2. Differences in household incomes. Say for example total expenditure on education Rs.60000 per annum in case of lower income group household can be in the range of 20-30% of the family income and may get the first or the second rank; but the same expenditure in case of the higher income group household may be less than 10% of the household expenditure and may get the third or the fourth rank. The rank may also get affected by the socio-cultural characteristics of the households. The socio-cultural attributes of the household analysed for this purpose are: Language spoken at home, Religion followed by the household, Caste, Parents’ education, nature of parents’ occupation. All these attributes and their association with education expenditure are tested with the help of the Chi-square technique.

6.4.1 Rank and Language

Mumbai being a cosmopolitan city has a lot of linguistic variety. Total 19 languages were reported by 400 households that were surveyed. While performing Chi-square test all the
languages were not considered as the frequency of many languages was extremely low. Out of 19 languages, only three major languages were considered for this purpose.

Null hypothesis: There is no relation between the language spoken at home and the rank given to the education expenditure.

The calculated value of chi-square = 23.95 > the table value of chi-square = 15.507

(The P-Value = 0.002336 < 0.05) So, the null hypothesis is rejected. There is an association between the language spoken at home and the rank given to the household expenditure on education. Among the languages listed, the highest rank to education was given by Telegu speaking households. (Rank Mean = 1.6) This was followed by Hindi and Malayalam speaking households (Rank Mean for both = 1.67). Marathi speaking households had Rank Mean = 1.77 and for the Gujrati speaking households, the Rank Mean = 2.12. The lowest Rank Mean = 2.78 was observed in the case of households that reported English as the language of communication at home and they belong to the high-income group. High income group families spent substantially more on their children’s education compare to that of the lower income groups; even then it is not the highest expenditure item in the family budget. These families have given higher ranks to the various life style expenditures i.e. expenditure on the luxury goods and services. Mean of the rank given to the expenditure on education by all the households taken together was 1.83.

6.4.2 Parents’ Education and Rank

Parents, both mother and father were categorised on the basis of their education. The lowest level was below SSC and the highest level was post-graduation and above.

Mother’s education and the Rank
Null Hypothesis: There is no relation between the mother’s education and the rank given to the household expenditure on education.

Calculated of chi-square = 2.9077 < table value of chi-square = 15.507.

(the p value = 0.940016 > 0.05) So the null hypothesis is accepted. Mother’s education did not seem to influence amount of money spent on education.

**Father’s education and the Rank**

Null hypothesis: There is no association between the father’s education and the rank given to the household expenditure on education.

Calculated of chi-square = 13.117 < table of value of chi-square = 15.507

(the p value = 0.107887 > 0.05). So, the null hypothesis is accepted.

Education of both the parents does not have any association with the rank given to the expenditure on education in the family budget.

**6.5 Parent’s education and Income of the Household**

**6.5.1 Mother’s Education and Income of the Household**

Null hypothesis: Mother’s education and the income of the household are not associated.

Calculated chi-square = 172.185 > Table value of chi-square = 21.026

(the p value = 0.0001< 0.05) So, the null hypothesis is rejected. Mother’s education and household income are associated.

Level of mother’s education and the income of the family are associated. This is not because all educated mothers were working and contributing to the family income. But in the upper income groups non-working mothers also were more educated than that of in the lower income
groups. 31.8% of mothers having education level below SSC belonged to the low-income group. In the high income group this percentage was only 2.7%. Similarly, percentage of graduate and post graduate mothers in the low-income group was 7.4% and zero percent respectively. In case of the high income group, this percentage was 42.5% and 37% respectively.

6.5.2 Father’s Education and Income of the Household

Null hypothesis: Father’s education and income of the household are not associated.

Calculated chi-square = 149.938 > Table value of chi-square = 21.026

(the p value = 0.0001 < 0.05.) So, the null hypothesis is rejected. There is connection between father’s education and the income of the household. This is possibly because with increased education the possibility of earning higher income increase. 26.9% of father’s having education level below SSC belonged to the low-income group. In the high-income group this percentage was zero. Similarly, percentage of graduate and post graduate fathers in the low-income group was 17.6 and 0.9 percent respectively. In case of high income group, this percentage was 37 and 50.7 respectively.

Education level of both the parents and income level of the family are associated.

6.6 Parent’s Occupation and Income of the Household

6.6.1 Mother’s Occupation and Income of the Household

Null hypothesis: Nature of Mother’s Occupation and Income of the household are not associated.
Calculated chi-square = 47.174 > Table value of chi-square = 16.919
(the p value = 0.00001 < 0.05). So, the null hypothesis is rejected. There is association between mother’s occupation and the level of household income. 264 (66%) of mothers out of total 400, stated ‘home maker’ as their occupation. Among low income group 81.5% mothers stated ‘home maker’ as their occupation and only 18.5% were working. In the high-income group, 39.7% were home makers and 60.3% were working. Among all the income groups ‘home maker’ was the most common occupation of the mothers. Among working mothers, the most common occupation was ‘Service’-Public/Private sector (23%). Only 11% reported Business/Professional practice/self-employment as their occupation.

6.6.2 Father’s Occupation and Income of the Household

Null hypothesis: Nature of father’s Occupation and Income of the household are not associated.

Calculated Chi-square = 19.625 > Table value of chi-square = 16.919
(the p value = 0.020 < 0.05). So, the null hypothesis is rejected. There is association between father’s occupation and the level of household income.

The most common occupation in case of fathers was Private service or public sector service. 60.6% fathers mentioned ‘service’ as their occupation. These fathers were almost equally distributed across all income groups. This was followed by business, professional practice, self-employment; 37.2% fathers were in this category. Only 2.25% fathers mentioned home-making as their occupation. In the high-income group category, the highest percentage was of businessmen fathers (28.8%). Among low and lower middle-income group fathers, the most common occupation was ‘service in the private sector’; about 38.9% fathers reported it. In case of the higher middle-income fathers, the most common occupation was ‘public sector service’. About 36% fathers reported it.
Both the parent’s occupation and the income of the household are related.

6.7 Income of the Household and the Rank

<table>
<thead>
<tr>
<th>Income Group</th>
<th>Number of Households</th>
<th>Average Rank(Mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>108</td>
<td>1.77</td>
</tr>
<tr>
<td>Lower Middle</td>
<td>133</td>
<td>1.74</td>
</tr>
<tr>
<td>Higher Middle</td>
<td>86</td>
<td>1.78</td>
</tr>
<tr>
<td>High</td>
<td>73</td>
<td>2.16</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>400</strong></td>
<td><strong>1.83</strong></td>
</tr>
</tbody>
</table>

*Source: Field Survey*

Null Hypothesis: There is no relation between the income of the household and the rank given to the education expenditure.

Calculated of Chi square = 14.934 > table value of chi-square=12.595.

(the p value = 0.020776<0.05) So, the null hypothesis is rejected. There is an association between income of the household and the rank given to the education expenditure. The highest ‘rank mean’ is in case of the lower middle-income group. And the lowest ‘rank mean’ is in the case of high income group. Low, Lower middle and higher middle all the three have very close rank means: in the range of 1.74 to 1.78. This indicates, children’s education is priority for all the income group parents. But the high-income group parents can spend more comfortably on their children’s education without much financial stress.

6.8 Income group and Percentage Expenditure on education
Null Hypothesis: Percentage household income spent on education and the income of the household are not related.

Calculated value of chi square = 50.404 > Table value of chi-square = 21.026

(the p value is =0.00001<0.05) So, the null hypothesis is rejected. There is an association between income of the household and the percentage of income spent on education. The table above indicates that the higher percentage of income was spent on education by low and lower middle-income groups. Food expenditure and medical expenditure competes with education expenditure in these families. About 39 (36%) households of low income category stated their expenditure on education is 30% or more of their income. 43(32%) households of lower middle-income category spent 30% or more of their income on education. In the case of higher middle-income group 29 (33.72%) households are in this category. In the case of high income group only 9 households (12.32%) spent 30% or more on education. Education expenditure pinches more to the lower income categories. Subsidised education (in the aided institutions) is accessible to all the income groups. Children from the higher income groups are more likely to
get admission into well-known government aided colleges where cut-off percentages are normally very high. The higher income group children have an easy access to various study aids that help them to score better in the Board Examinations. During interaction with the households, it was observed that some low-income group families sent their children to the nearby unaided college as the children could not get admission to the aided college in the vicinity. Instead of sending a child to the far away aided college the parents preferred the nearby unaided college that charged higher fees but money on travelling and food expenditure could be saved. Besides it also saved children’s time and energy on travelling that could be used for some part time job/helping parents.

6.9 Medium of Instruction and Income of the Households

Null hypothesis: There is no association between medium of instruction at school level and the income of the household

Calculated value chi square=208.258 > Table value of chi-square =7.851

(the p value= 0.0001<0.05). So, the null hypothesis is rejected. There is an association between medium of instruction at the school level and the income of the household.

95.5% of the children of high income group had studied or are studying in the English medium schools. Whereas, 73% of the children from the low income group had studied or are studying in the vernacular medium schools and only 27% have studied in the English medium schools. Situation for the lower middle class is slightly better.44.9% students from this class go to English medium schools. In the case of higher middle class 69.5% go to the English medium schools. As was discussed in the Chapter number five, parents have voted by their feet. Allmost all the households, irrespective of the income group accepted that knowledge of English is must for the survival in the urban employment market. Some low-income group parents stated that they would prefer English medium school for their children but can’t afford. They
were asked about 25% reservation under the RTE in all the schools. The answer was- “the RTE will give the admission, but how will we finance the private tuition expenditure?” the level of education of both the parents in low income group families is normally low. So, if they send their children to the English medium school then they need to send their children for the private tuitions right from the first standard.

6.10 Access to Information and Communication Technology (ICT)

6.10.1 Possession of Computer and Income Group

Null Hypothesis: Possession of computers and income of the household are not related.

Calculated value of chi Square=64.216. Table value of chi-square= 7.815

(the p value is 0.00001 <0.05) Therefore null hypothesis rejected. Among low income group, only 56.5% households own computer. In case of the high income group this percentage was 98.63. The percentage for lower middle and upper middle was 86.5 and 89.5 respectively. Though prices of computers have been decreasing in the last decade, still it is not affordable to all the income groups. Some low-income group families had a computer that was shared among three to four children and sometimes with the parents too. So, the per capita availability of the computer hours was very less per child. In the upper income groups, normally each child has its own computer or some computer substitute such as expensive smart phone. This increases the convenience in the use of the ICT.

6.10.2 Internet Access and Income Group

Computer along with the internet facility is a modern day study tool. Importance of computers and internet facility in the education has been already discussed in the chapter three. Use of information and communication technology is indispensable in the modern-day education. But the affordability of the ICT is a major question mark. To test the link between access to the
internet facility and income group of the household, the following null hypothesis was formulated.

Null Hypothesis: Internet access and income group of the household are not related.

Calculated chi square = 72.934 > Table value of chi-square = 12.592.

(the p value = 0.00001 < 0.05)

Therefore, null hypothesis rejected. There is an association between availability of the internet facility and the income of the household. Only 43.6% of the low-income group families had internet access at home. Whereas 94.5% families of the high-income group had internet access at home. 88.4% of lower middle income families and 94.5% upper middle income families had internet access at home.

6.11 Various expenditures on education and their association with income of the Household

This section analyses the impact of income on the education expenditure of different categories. To analyse this the chi square technique is used as the main statistical tool as before. Initially the mean and the median of each type of expenditure are compared. Then each type of expenditure is analysed separately. All the expenditures are stated as an average expenditure per child. So, expenditure in the range of Rs.10000-20000 per year per child in a household having two children means, the minimum that a household spends is Rs. 20000 and maximum Rs.39999 for the given type of expenditure. It was observed that all the children in the household do not require identical expenditures. This enables the parents to allocate their financial resources as per the need of the child. In the household where two children are studying at the higher secondary level one in the Arts faculty and the other in the Science faculty will have two completely different patterns of education expenditures. While
calculating the average expenditures these differences cannot be recorded. But these averages can be used to estimate the average financial burden that a household experiences due to the specific type of expenditure. In the case of low income groups average expenditure per child for most of the items mentioned below is less than that of higher income groups. But this not necessarily means their gross expenditure for that item is also less than that of the high-income groups. Gross expenditure of low income families increases because they tend to have more children.

**Comparison between Mean and Median Expenses**

![Graph 6.1 Mean and Median Expenditures](image)

In the chart above ten types of expenditures on education per child, per year are presented. (all expenditures rounded up) The list of the expenditures is as follows-1. school fees 2. coaching class expenditure at school level 3. fees at the higher secondary level4.coaching/tuition class expenditure at the higher secondary level5.college fees 6. coaching/tuition class expenditure at college level 7. travelling for education purpose.8. expenditure on the outside food consumed
during college or tuition class hours. 9. other expenditure on various types of training/coaching that helps children becoming employment ready 10. cell phone expenditure

It is apparent that for all types of expenditures, the mean expenditure is more than the median expenditure and the difference between the two for some categories is substantial. This indicates higher values of expenditures for the third and the fourth quartile of the data. The chi-square test was used to trace the relation between each type of expenditure and the income of the household. The results are indicative that there is association between income of the household and the various expenditures on education. Government gives subsidy at all the levels of education with the intention to make education affordable to all the income groups. Unfortunately, the quality of education is not monitored by the government effectively. So wherever possible parents try to spend extra to compensate for the quality deficiency in the public sector education. Some choose private sector education especially at the school level. But again, private sector education is not a guarantee for the quality education. When it comes to the higher education, public sector institutions are preferred for two reasons- 1. low fees 2. Teachers at public sector institutions are better qualified 3. brand name of the public sector institutions. Fees of the good quality private sector institutions of higher learning are very high and affordable to the high-income groups.

**Different Types of Expenditures and Income of the Household**

**6.11.1 Schools Fees per Child and Income group**

<table>
<thead>
<tr>
<th>Income Group</th>
<th>Low</th>
<th>Lower Middle</th>
<th>Higher Middle</th>
<th>High</th>
<th>% of Total (400) Households</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 10000</td>
<td>80.55</td>
<td>71.42</td>
<td>48.83</td>
<td>31.50</td>
<td>61.50</td>
</tr>
</tbody>
</table>
Null Hypothesis: School fees and the income of the household are not related.

Calculated chi Square = 73.014 > Table value of Chi Square = 12.592

(the p value is 0.00001 < 0.05)

Therefore, null hypothesis rejected. There is an association between income of the household and the school fees. As can be seen in the table above mean school fees is much higher than the median school fees. This is because 61.75% of the 400 households surveyed, were spending Rs.10000 or less per child, as the school fees. Out of low income group, 80.55% households were in this category; this was followed by the lower middle (71.42%). As the level of fees increased, the proportion of higher income group households increased in that category and vice a versa.

### Private Tuitions Expenditure at the School Level and Income group

<table>
<thead>
<tr>
<th>Income Group</th>
<th>Low</th>
<th>Lower middle</th>
<th>Higher Middle</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

**Table 6.4 School Private Tuition and Income**
Null Hypothesis: Private tuition expenditure at the school level and income of the household are not related.

Calculated chi Square = 45.042 > Table value of chi-square = 16.919.

(the p value is 0.00001 < 0.05)

Therefore, null hypothesis is rejected. Private tuition expenditure at the school level and the income of the household are associate. Private tuition expenditure is voluntary and a child may not require private tuitions if teaching learning experience at the school level is satisfactory. Somehow most of the parents prefer to send their children to private tuition at least for the last 2-3 years of schooling. Variety of tuition classes are available charging different fees that depends on the location of the tuition class, the quality of teachers, the subjects taught and the infrastructure facilities provided. Obviously, the high income group parents choose the best available. 19.44% families in the low-income group reported ‘nil’ expenditure on the private tuitions but only 2.73% families in the high-income group reported ‘nil’ expenditure. Tuition expenditure per child per year Rs. 50000 and above was reported by 21.91% households in the high-income group; for low income group this percentage is only 1.85%. About 35% low income households reported tuition expenditure in the range of Rs.5000-20000 and 9.25%
reported in the range of Rs.20000-50000. The most common pattern of expenditure for all the income groups is: Rs.20000-50000 per year, per child. In the expenditure range Rs.20000-50000, the Lower middle, the higher middle and the high-income group had 21.50%, 25.58%, 26.03% households respectively. Almost 20% households out of total 400 surveyed were in this category.

### 6.11.3 Fees Paid at the Higher Secondary Level and Income Group

Null Hypothesis: Fees paid at the higher secondary level and income of the household are not related.

Calculated chi Square = 9.104 < Table value of chi-square= 12.592.

(the p value is 0.168>0.5). Therefore, null hypothesis accepted. About 70% of the households stated fees paid at the higher secondary level as less than Rs.10000 per year, per child. Majority (in the range of 63% - 76%) households belonging to all the income groups pay fees less than Rs.10000 per child at the higher secondary level. This result was expected, as was observed in the Chapter Number Five, about 65% children at the higher secondary level go to government aided institutions.

### 6.11.4 Private Tuition Class Expenditure at the Higher Secondary Level (HSC) and Income of the Household

Table 6.5 Higher Secondary Private Tuitions and Income

<table>
<thead>
<tr>
<th>Private tuition Expenditure</th>
<th>Income Group</th>
<th>% of Total (400) Households</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>Lower middle</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>%</td>
</tr>
</tbody>
</table>

---
Null Hypothesis: Private tuition class expenditure at the higher secondary level and income of the household are not related.

Calculated chi Square= 27.166 > Table value of chi-square = 9 is 16.916.

(the p value = 0.001 < 0.05) Therefore, null hypothesis is rejected. Private tuition class expenditure at the higher secondary level and income of the household are related. Out of total 400 households, 12.5% households indicated no expenditure on the private tuitions at the HSC level. Out of 108 low income households, about 23.15 indicated no expenditure on private tuitions at Higher Secondary level. In the high-income group this percentage was only 2.74. For lower and upper middle-income groups this percentage was 12.78 and 6.97 respectively.

The most common range of expenditure for the low-income group was Rs.5000-20000; For the lower and the higher middle and high-income groups it was Rs.20000-50000. Students studying in the commerce and Science faculty were more prone to join tuition classes at the higher secondary level.

### 6.11.5 College Fee and Income

<table>
<thead>
<tr>
<th>College Fee</th>
<th>Income Group%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil</td>
<td>23.15</td>
</tr>
<tr>
<td>Up to 5000</td>
<td>19.44</td>
</tr>
<tr>
<td>5000-20000</td>
<td>37.04</td>
</tr>
<tr>
<td>20000-50000</td>
<td>12.96</td>
</tr>
<tr>
<td>Above 50000</td>
<td>7.40</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

| Mean Expenditure: Rs 38674 | Median Expenditure: Rs 20833 |

Source: Field Survey
Null Hypothesis: College fee and income the income of the household are not related.

Calculated chi Square = 23.952>Table value of chi-square = 16.919. (the p value is 0.004<0.05). Therefore, null hypothesis rejected. College fee and the income of the household are related. In case of the aided colleges, fees for the conventional degree programmes are up to Rs.5000 per child. Though higher education is subsidised in India, not everybody gets admission into the aided college that is near to one’s home. Propensity to travel for education purpose is very high in Mumbai but that is only if the education institution has decisive quality advantage. Similarly, many non-conventional degree programmes started in the last two decades are unaided. So even for the low-income group, the most common pattern of expenditure on the college fees is Rs.5000-20000 per year, per child.49.1% households in the low-income group reported this expenditure. This is also the most common pattern of expenditure even for the two upper income groups. As was discussed in the Chapter number five, most of the well-known colleges in Mumbai are in the aided segment. The cut-off percentage for the admission in these colleges is very high. All income group students aspire to get into these colleges. So, the average college fee expenditure of the household gets affected by the number of children getting admitted to the aided colleges.
6.11.6 Tuition Class Expenditure at the College Level

Null Hypothesis: Private tuition class expenditure at the degree college level and the income of the household are not related.

Calculated chi Square = 4.814 < Table value of chi-square = 12.592. (the p value is 0.567 >0.05) Therefore, null hypothesis accepted. At degree college level proportion of students going for the tuition classes dwindles very rapidly. 60.25% households reported ‘nil’ expenditure on tuition classes at the degree college level. The reasons for this are already discussed in the chapter number Five. Tendency to go/not go for the tuition classes at this stage of education is almost same for all the income groups. The percentage of households reporting no tuition class was 56.48% for the low income group. It was 61.64% for the high income group. 25% households spent up to Rs. 20000 on the private tuitions at the college level. 14.75% households spent above Rs. 20000 for this purpose.

6.11.7 Travelling expenditure and the Income of the household

Null Hypothesis: Travelling expenditure for education purpose and the income of the household are not related.

Calculated chi square = 19.342 > Table value of chi-square = 7.815. (the p value = 0.000232 >0.05). Therefore, null hypothesis rejected. There is an association between travelling expenditure for education purpose and the income of the household. The travelling expenditure for education purpose is not an insignificant component of education expenditure in the city of Mumbai. Why it needs to be incurred is discussed in the chapter number five. The most common pattern of this expenditure is up to Rs 10000 per child per year. About 77% households reported this. Above Rs.10000 travelling expenditure per child per year is obviously more common among the higher income groups. Only 4.26%of the households from the low-income group reported this level of expenditure. Whereas for the lower middle income
this was – 16.54% households; For the higher Middle-23.25% households and for High Income group it was-18.77% households.

6.11.8 Outside food expenditure during education hours and Income of the household

Null Hypothesis: Outside food expenditure and income of the household are not related.

Calculated chi Square= 11.789 >Table value of chi-square = 7.815.

(the p value =0.008>0.05). Therefore, null hypothesis rejected. There is association between outside food expenditure during education hours and income of the household. Why eating out during education hours is unavoidable is discussed in the chapter five. There were only 13% of the households that reported nil expenditure on the outside food during education hours. 76.25% households indicated expenditure up to Rs.10000 per child, per year. Whereas 10.75% households indicated expenditure above Rs.20000 per child.20.55% of the households from the high-income group reported Rs.20000 or more as food expenditure per child. For the low-income group this percentage was only 5.5%.

6.11.9 Cell phone usage expenditure and Income of the Household

Null Hypothesis: Cell phone expenditure and income of the household are not related.

Calculated chi Square= 17.806 >Table value of chi square = 12.592.

(the p value = 0.007 > 0.05). Therefore, null hypothesis rejected. Cell phone expenditures per child and income of the household are related.

12.4% of the low-income group households reported ‘nil’ expenditure on cell phone usage of their children. For the higher middle and high-income groups this proportion was less than 2%. Most common pattern of expenditure on cell phone for all the income groups was up to Rs.5000 per year, per child.63% households were in to this category.13.7% households of the high-income group reported cell phone expenditure Rs.10000 and above per child. For Lowe middle
and upper middle-income groups this proportion was about 4% and for the low-income group it was only 1.85%.

6.11.10 Other expenditures and the Income of the Household

<table>
<thead>
<tr>
<th>Income Group %</th>
<th>Low</th>
<th>Lower middle</th>
<th>Higher Middle</th>
<th>High</th>
<th>% of Total (400) Households</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil</td>
<td>29.63</td>
<td>19.55</td>
<td>18.60</td>
<td>5.49</td>
<td>19.5</td>
</tr>
<tr>
<td>Up to 5000</td>
<td>37.04</td>
<td>23.31</td>
<td>24.42</td>
<td>17.81</td>
<td>26.25</td>
</tr>
<tr>
<td>5000 - 20000</td>
<td>25</td>
<td>37.59</td>
<td>33.72</td>
<td>19.19</td>
<td>30</td>
</tr>
<tr>
<td>20000 - 50000</td>
<td>6.48</td>
<td>16.54</td>
<td>15.11</td>
<td>32.88</td>
<td>16.5</td>
</tr>
<tr>
<td>Above 50000</td>
<td>1.85</td>
<td>3.007</td>
<td>8.14</td>
<td>24.66</td>
<td>7.75</td>
</tr>
</tbody>
</table>

Mean Expenditure: Rs 22292
Median Expenditure: Rs 15000

Source: Field Survey

‘Other expenditure’ are the expenditures on various activities that help children become employment ready or help them to clear some prestigious entrance examination for the post-graduation programme. This also involves expenditure on various training programmes meant for nurturing soft skills, hobby classes etc.

Null Hypothesis: Other expenditure and income group are not related.

Calculated chi Square=61.094 >Table value of chi-square=16.919.
(the p value = 0.00001>0.05). Therefore, null hypothesis is rejected. ‘Other expenditure’ on education and the income of the household are associated. Almost 30% of the households from Low income group reported nil expenditure for this purpose. Whereas only about 5% in the high-income group reported nil expenditure for this purpose. 18-19% of Lower middle and upper middle-income groups reported nil expenditure. The most common category was up to Rs 5000 for the low-income group, 37.04% households reported it. Rs 5000-20000 was the most common category for both lower middle and upper middle-income group; about one third households from both the income groups reported it. For the higher income group, the most common category was Rs.20000 -50000 per child per year. About 33.88% of the high-income group families reported it. There were 24.66% families from high income group that reported expenditure above Rs.50000 per child per year. For low and lower income group this percentage was 1.85%, for lower middle income-about 3 %; for upper middle 8.14%. This expenditure is not directly related to the school or college curriculum and so not meant for boosting the school /college/university examination results. That is managed by sending a child to the private tuition classes. This ‘other’ expenditure is meant for strengthening the link between education and the employment market. To some extent this expenditure can influence the economic returns from investment in education and so it is very crucial. Some higher income group households spend a lot for boosting academic results, but hardly incur ‘other expenditures’. In case of lower income groups, they simply don’t have enough money to finance these ‘other’ expenditures. Lack of awareness about the importance of these ‘other expenditure’ is also one of the major problem especially in the low and lower middle-income groups but some high-income group parents also are equally ignorant about these facts.

6.12 Religion and Expenditures on Education

6.12.1 Religion and Income of the Households
Association between religion and the income Group of the households was tested.

Null Hypothesis: Religion and the income of the household are not related

Calculated value of chi square = 47.8833 > Table value of chi square =16. 919.

(the p value = 0.00001 < 0.05) So the null hypothesis is rejected. There is an association between religion and the income group of the household. 54.28% of Muslim households and 62.3% of Muslim children belonged to the low-income group and only 0.06% households and 2.9% of the Muslim children belonged to the high-income group. 24.37% Hindu households and 28.3% Hindu children belonged to the low-income group. 17.72% of the Hindu households and 14.4% of Hindu children belong to the high-income group. 40% of Buddhist households and 43.8% Buddhist children belonged to the low-income group. 8% of Buddhist households and 6.8% of Buddhist children belonged to the high-income group. 13.33% Christian households and 43.3% Christian households belonged to the low-income group.

6.12.2 Religion and Rank Given to the Education Expenditure

Households were grouped into five classes according to their religion. Average rank for each religious category was calculated. The highest rank to education expenditure was given by the Buddhist Households (Rank Mean =1.64). This was followed by the Hindu Households (Rank Mean = 1.80), Muslim households (Rank Mean = 1.89), Christian households (Rank Mean = 2.20) and ‘Any other religion’ (Rank Mean =2.56)

Null hypothesis: There is no relation between the religion practiced by the household and the rank given to the education expenditure.

The calculated value of Chi-square =11.8225< The table value of chi-square= 15.507
(the p value = 0.07 > 0.05) So, the null hypothesis is accepted. There is no association between rank given to the education expenditure and the religion of the household.

6.12.3 Religion and the Percentage of the Income Spent on Education

Null Hypothesis: Percentage household income spent on education and the religion of the household are not related.

Calculated value of chi Square = 22.6977 > Table value of chi-square=16.919. (the p value is =0.006912<0.05) So, the null hypothesis is rejected. There is an association between religion of the household and the percentage of income spent on education. In the case of Muslim households about 2.86 of the households spent 10% or less of their income on education and 51.43 spent 30% or above on education. This is significantly different compared to other religion households. In case of Hindu households this percentage is 10.76 and 29.11 respectively. In case of Buddhist households this percentage is 16 and 32 respectively and in case of Christians it is 33.33% and 12.5 % respectively.

6.12.4 Schools Fees per Child and Religion

Null Hypothesis: School fees and the religion of the household are not related.

Calculated chi Square = 6.977< Table value of chi Square = 12.592. (the p value = 0.322977 >0.05). Therefore, null hypothesis is accepted. There is no association between religion of the household and the school fees. About sixty percent of households from each religion category were paying school fees less than Rs. 10,000 per year per child. There was also not much of the difference in case of fee category Rs. 10,000 to 20,000. But in case category Rs 20,000 and more there was significant difference. Percentage of Muslim and
Buddhist households was about 9 and 4 respectively. Whereas for other religion households it was about 16.

6.12.5 Private tuitions expenditure at the School level and Religion

Null Hypothesis: Private tuition expenditure at school level and the income of the religion are not related.

Calculated chi Square= 33.0881> Table value of chi-square=16.919. (the p value = 0.000129 <0.05). Therefore, null hypothesis rejected. Private tuition expenditure at the school level and the religion of the household are associate. For Muslims and Buddhist households the most common category of school private tuition expenditure was less than Rs.5000 per child per year. Whereas for all other religion households it was Rs. 5,000-20,000. There were just 5% Muslim households and 8% Buddhist households in the two upper category expenditures taken together. Whereas this percentage for other religion households was about 30.

6.12.6 Fees Paid at Higher Secondary Level and Religion

Null Hypothesis: Fees paid at the higher secondary level and the religion of the household are not related.

Calculated Chi Square= 9.8113< Table value of Chi-square= 16.919 (the p value = 0.365979 > 0.5) Therefore, null hypothesis accepted. Majority households from each religion category were paying higher secondary level fees less than Rs.20000 per year per child. In fact, about 60% of the households irrespective of religion, were paying fees less than Rs.5000 per child per year.
6.12.7 Private tuition Class Expenditure at the higher secondary level and Religion

Null Hypothesis: Private tuition class expenditure at the higher secondary level and the religion of the household are not related.

Calculated chi Square= 38.8007 > Table value of chi-square = 16.919.

(the p value = 0.00032 < 0.05)

Therefore, null hypothesis rejected. Private tuition class expenditure at the higher secondary level and religion the household are related. Here again majority Muslim and Buddhist households were observed to be at the lower end of the spectrum. Most common expenditure for this category in case of Muslim households is ‘Up to Rs. 5,000. Same is the case with the Buddhist households. Whereas majority of the all other religion households fall in the two middle category expenditures that is- Rs. 5,000 -20,000 and Rs. 20,000 -50,000.

6.12.8 College Fee and Religion

Null Hypothesis: College fee and the religion of the household are not related.

Calculated chi Square= 24.232 > Table value of chi-square= 16.919.

(the p value is 0.003949 < 0.05) Therefore, null hypothesis rejected. College fee and the religion of the household are related. Unlike higher secondary fees, college fees show a lot of variation across different religion groups, but this variation may be due the fact that certain religion households(neo-Buddhist) are beneficiaries of the affirmative policies. As a result, their expenditure on the college fees remains at low level. So, the Chi-square results in this case need to be interpreted with caution. Here too, Muslim households are indicating economic
disadvantage. About 49% Muslim households indicated expenditure up to Rs.5000. This shows their clear preference for the aided institutions or programmes. Whereas 45-50% of other religion households spend about Rs.5000 -20,000 as college fee.

6.12.9 Tuition class expenditure at the college level and Religion

Null Hypothesis: Private tuition class expenditure at the degree college level and the religion of the household are not related.

Calculated chi square= 12.5813 < Table value of chi-square = is 16.919. (the p value is 0.182483 > 0.05). Therefore, null hypothesis accepted. It has been noted in the chapter 5, percentage of students going for private tuitions dwindles significantly at the college level across all income groups. So, the pattern of expenditure on college tuitions more or less was observed to be same in case of all religion groups.

6.12.10 Other expenditures and the Religion

‘Other expenditure’ are the expenditures on various activities that help children become employment ready or help them to clear some prestigious entrance examination for the post-graduation programme. This also involves expenditure on various training programmes meant for nurturing soft skills.

Null Hypothesis: Other expenditure and religion are not related.

Calculated chi square= 17.0147 > Table value of chi-square=16.919. (the p value is 0.048486 < 0.05). Therefore, null hypothesis is rejected. Other expenditures on education and the religion of the household are associated. Chi square result is significant here especially because of marked discrepancy between Muslims, Buddhist and rest of the religion households’ expenditures. About 22-25% belonging to Hindu, Christian and other religion spend Rs. 20,000 or more on ‘other ‘expenditures per child per year. In case of Muslims households only
about 5% and in case of Buddhist only about 4% households spend this much. Among Muslim households, about 75% and Buddhist 68% spend less than Rs.5000 for this category.

6.13 Caste and Expenditures on Education

Association between caste of the household and education expenditure is traced below. For this analysis in case of open category, only Hindu households are included and all the other religion households are omitted. The households were categorised as Open, Other Backward Class(OBC), Scheduled caste(SC), Scheduled Tribes(ST) and Nomadic tribes(NT).

6.13.1 Caste and Income of the Household

Null hypothesis: Caste and income of the household are not related. Calculated chi square=33.7442>Table value of chi-square =12.592

(the p value = 0.00001< 0.05) Null hypothesis is rejected. Caste and income of the household are associated.

18.88% of the total open Hindu households belong to the low-income category and 23.17% belong to the high-income category. For SC, ST and NT as one group this percentage is 41.5 and 3.8 respectively. In the case of the OBC category, 38.2% households belong to the low-income group and 3.6 belong to the high-income group.

6.13.2 Caste and Rank Given to the Education Expenditure

The highest Rank mean was in case of ST category-1.33 followed by NT -1.67, SC-1.8, OBC-1.82 and Open-1.85

Null hypothesis: There is no relation between the caste of the household and the rank given to the education expenditure.

Calculated of chi square = 2.5351< Table value of chi-square =9.488.
null hypothesis is accepted. The result is not significant at $p < 0.05$.

The rank given to the education expenditure and the caste category are not related.

**6.13.3 Caste and the Percentage Expenditure on Education**

Null Hypothesis: Percentage household income spent on education and the caste of the household are not related.

Calculated value of chi-square = 1.4456 < Table value of chi-square = 12.592

(\text{the \ p \ value \ is} = 0.963028 > 0.05) So, the null hypothesis is accepted. There is no association between caste of the household and the percentage of income spent on education.

**6.13.4 Schools Fees per Child and Caste**

Null Hypothesis: School fees and the caste of the household are not related.

Calculated chi Square= 21.7451 > Table value of chi Square = 9.488

(\text{the \ p \ value} = 0.000225 < 0.05)

Therefore, null hypothesis is rejected. There is an association between caste of the household and the school fees. Among Hindu open category households, about 19% paid school fees per child per year Rs. 20,000 or more. In case of OBC category 11% households were in this category and in case of SC, ST and taken together 2% households were in this category. 78% of OBC and 75% of SC, ST, NT households (taken together) paid fees less than Rs. 10,000 per year per child.

**6.13.5 Private tuitions expenditure at the School level and Caste**

Null Hypothesis: Private tuition expenditure at school level and the caste of the household are not related.
Calculated chi square = 30.6981 > Table value of chi-square = 12.592

(the p value = 0.000029 < 0.05)

Therefore, null hypothesis rejected. Private tuition expenditure at the school level and the caste of the household are associated. Most common category of private tuition expenditure at school level in case of open Hindus was ‘Rs.5000 - 20,000 per child per year. Where as in case of SC, ST and NT percentage was equal for the first two categories of expenditure. In the expenditure category ‘up to Rs.5000’ 45% households and in category Rs.5000-20000 also 45% households were observed. But in the higher categories that is Rs 20,000 to 50000 and Rs.50000 and above, percentage of SC, ST and NTs was 8% and 2% only. Percentage of OBC households was very low in case of the highest category but it was comparable to the open category in case of category Rs.20000-50000. Surprisingly, OBC percentage was the highest in case of the category ‘up to Rs.5000’.

**6.13.6 Fees Paid at Higher Secondary Level and Caste**

Null Hypothesis: Fees paid at the higher secondary level and the caste of the household are not related.

Calculated chi square = 13.3674 < Table value of chi-square = 12.592

(the p value = 0.03756 > 0.05)

Therefore, null hypothesis rejected. Fees per child, per year ‘up to Rs.5000’ is the most common category for all the caste. Out of OBC households, about 76% fall in this category followed by SC, ST, NT (about 66%). In case of open category, about 57% were in this category. In case of two middle category expenditures taken together, (Rs.5000-20,000 and Rs. 20,000 -50,000, Open category households showed the highest percentage (44%) followed by
SC, ST, NT (32%) and then OBC (22%). Fees paid at the higher secondary level depends on whether child is studying in aided or unaided school/college and also on whether child is beneficiary of the affirmative action by the government. High fees paid by the SC, ST and NT households indicate that children in these households are studying in the unaided institution for various reasons. Some of these reasons are: 1. household prefers college in the vicinity to avoid food/travelling expenditure 2. children did not get admission in the aided college of their choice due to the high admission cut-offs even for reserved category, especially in case of Science and Commerce faculty.

6.13.7 Private tuition Class Expenditure at the higher secondary level and Caste

Null Hypothesis: Private tuition class expenditure at the higher secondary level and the caste of the household are not related.

Calculated chi square= 26.1234 > Table value of chi-square = 12.592

(the p value = 0.000211 < 0.05)

Therefore, null hypothesis rejected. Private tuition class expenditure at the higher secondary level and caste of the household are related. Highest number of the households in the SC, ST and NT category (about 53%) and the OBC category (about 35%) were in the lowest category of this expenditure i.e. ‘up to Rs.5000’ per year per child. Whereas highest number of households in the open category (about 35%) were in ‘Rs.5000-20000’ category.

6.13.8 College Fee and Caste

Null Hypothesis: College fee and the caste of the household are not related.

Calculated chi -square = 22.766 >Table value of chi-square = 12.592

(the p value = 0.000879 < 0.05)
Therefore, null hypothesis rejected. College fee and the caste of the household are related. College fees in case of SC, ST and NT and non-creamy layer OBC is low in aided colleges compare to that of open category students. Even in case of certain self-financing courses these students get benefits of affirmative action.

6.13.9 Tuition Class Expenditure at the College Level and Caste

Null Hypothesis: Private tuition class expenditure at the degree college level and the caste of the household are not related.

Calculated chi square = 9.1448< Table value of chi-square = is 12.592

(the p value = 0.165598>0.05) Therefore, null hypothesis accepted.

6.13.10 Other expenditures and the Caste

‘Other expenditure’ are the expenditures on various activities that help children become employment ready or help them to clear some prestigious entrance examination for the post-graduation programme. This also involves expenditure on various training programmes meant for nurturing soft skills.

Null Hypothesis: Other expenditure and Caste are not related.

Calculated chi Square= 5.159 < Table value of chi-square=12.592

(the p value is 0.523588>0.05)

Therefore, null hypothesis is accepted. Other expenditures on education and the caste of the household are not associated.

6.14 Conclusion

Various characteristics of the households and their association with the household expenditures on education were examined. For this all the major types of expenditures from the first standard
up to graduation level were considered. Similarly, association between socio-cultural features of the household and the income group of the household was also traced. The results are summarised below.

There is an association between income of the household and the number of children in the households. The age old established fact that poor tend to have more children was observed in the sample data. Desire to have at least one male child was observed to be the cause of having more than two children.

The gender issue was also considered while analysing the data. The important facts that emerged out of the analysis are- There is an association between the fees paid at the higher secondary level and gender. In the lower income groups fees paid by the male children was on an average more than that of the female children. Same can be said about the fees paid at the degree college level. In case of male children, household income and the choice of degree programme were not related but there was an association between income group and the degree programme chosen by female children. Majority of the female children from lower income groups were found to have enrolled in the least expensive conventional degree programme. At the level of higher income group this bias was not observed.

The rank of the expenditure on education in the total household expenditures was analysed with respect to the language, religion, caste and income of the household. Association was found between the language spoken at home and the rank given to the household expenditure on education. No association was found between rank given to the education expenditure and the religion of the household; but there was an association between religion and the income of the household. Same results were observed in case of the caste. No association was found between rank given to the education expenditure and the caste of the household; but there was an association between the caste and the income of the household.
Education level of both the parents was not found to have any association with the rank given to the expenditure on education. But education level of both the parents and income level of the family are associated. Similarly, both the parent’s occupation and the income group of the family are related.

There was an association between income of the household and the percentage of income spent on education. Same result was observed in case of religion. But there is no association between caste and the percentage income spent on education.

Association was also found between medium of instruction at the school level and the income of the household.

Access to Information and Communication Technology (ICT) was also associated with the income of the family.

There is an association between income of the household and the school fees paid per child but the fees paid at the higher secondary level and the income of the household are not related.

Private tuition class expenditure at the higher secondary level and the income of the household are related. Private tuition class expenditure at the degree college level and the income of the household are not related.

College fee and income of the household are related.

There is an association between travelling expenditure for education purpose, outside food expenditure during education hours, cell phone expenditures per child and income of the household. (each expenditure was tested separately)

‘Other expenditures’ on education and income of the household are associated.

Association between all the expenditures mentioned above (except travel, food and cell phone) were analysed also with reference to religion and caste. It was observed that association exists
between religion and school private tuition fees, higher secondary private tuition fees, college fees and ‘the other’ expenditures. Religion was not associated with school fees, higher secondary fees and college private tuition fees. In case of the caste of the household an association was found between caste and school fees, school private tuition fees, higher secondary private tuition fees, college fees. The caste was not associated with Higher secondary fees, college private tuition fees and ‘the other’ expenditures. Higher secondary fees and college private tuition fees are not associated with all the three i.e. income, religion and caste. All the remaining expenditures are associated with at least two factors out of the three mentioned above. School private tuition, Higher Secondary private tuitions and college fees are associated with all the three- income, religion, caste

All most all types of education expenditures are associated with the income of the household. Socio-cultural features of the household such as caste, religion, parents’ education and occupation are also related to the income of the household. Some of these features can have an impact on the child’s academic profile. So directly as well as indirectly income of the household plays a crucial role in shaping the academic and employment market profile of the children. Children belonging to the high and higher middle-income groups are decisively at the advantageous position compared to the children belonging to the low and lower middle-income groups. This disadvantage gets aggravated if these children also belong to the socially disadvantaged groups Availability of subsidised education from KG to PG does not seem to have enough impact in creating the level playing field.

**References:**


Website: Social Science Statistics [www.socscistatistics.com](http://www.socscistatistics.com)