Individual Demand for Higher Education in Tamil Nadu: A Choice between Degree Courses and Diploma Courses

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Abstract

Increasing individual demand for higher education due to achievement of higher secondary schooling and the first-generation learner try to improve their life-pattern. In this situation, the government has unable to spend for higher education due to heavy burden of School education. On the other hand, Economic reforms and liberal education policies have encouraged private sector in providing higher education. Existence of privatization has been working as de-facto commercialism. In this condition, who can affordable the high cost of higher education with long-term. This paper is focuses on the individual student's enrolment choice between Degree courses in higher education and Diploma courses. For the purpose, the study has been taken sample area of Villupuram district in Tamil Nadu. A structured questionnaire survey schedule is used for data collection. The study made the logit model to estimate the individual (student) enrolment choice between Degree courses and Diploma courses. The model explains the student enrolment choice between degree courses in higher education and Diploma courses. The result of the study reveals shows that scholastic ability-I (secondary level), Management of Institutions, Number of siblings in the family and scholarship influencing the individual demand to choose the degree courses in higher education.

Keywords: Low Cost, Short Duration, High Cost, Degree Courses, Diploma Courses.

Introduction

Increasing higher secondary passouts leads to increase the social demand for higher education in the system. Provision of school education is in the hands of both public and private sector. The public sector is still struggling to provide school education to all due to insufficient allocation of fund and non-monetary causes. It is reasons that the government is unable to provide high cost of higher education even need based in the system. On the other hand, Economic reforms and liberal education policies have encouraged private sector in providing higher education. Existence of privatization has been working as de-facto commercialism. In this situation, who can affordable the high cost of higher education. This paper is focuses on the student's enrolment choice between Degree courses in higher education and Diploma courses examined at micro level.

India is one of the largest democratic countries in the world. It is the second highly populated country and also with the third largest education system in the world in terms of number of students enrolling in schools. It also has been following democratic principles on education. It is the effect of constitutional provision given to education in general, from Directive Principle to Right to Education (RTE) Act. Consequently, the states also play a major role for the provision of education to the people.

In this context, State has to be responsible in providing education from elementary to higher education. It has been spending huge amounts for Universalisation of Elementary Education (UEE) to the ever-increasing 6-14 age-group population. Still India has been unable to achieve the goal of Universalization of elementary education. In the Second stage, too, questions of achieving Universal secondary education adds to the complexity of the problem. The state is spending more on elementary education in every Annual budget. It is for this reason the state is unable to spend more on higher education. Consequently, it has been unable to meet social demand for higher education.On the other hand, Economic reforms and liberal education policies have encouraged private sector in providing higher education. Existence of privatization has been working as de-facto commercialism. In this situation, who can affordable the high cost of higher education. In fact, the study has more concentrated on individual student's enrolment choice between Degree courses in higher education in the sample area.

Student Enrolment Choice between Degree and Diploma Courses

The aspect of the choice of eligible secondary graduates is the choice between degree and diploma courses in model 2. Out of the total sample (N=381), some students enrolled for higher education, some in alternatives i.e. enrolled in diploma courses and some students did not enroll anywhere. They may have taken up a job market (self-employed, family business and hired basis) or be idle. Here, there is a need to discuss why 20 per cent of students enrolled in diploma course. It is because people assume that diploma courses are less expensive when compared to degree courses in higher education. At the same time, the not enrolled category is omitted due to some logical (data) considerations. Because many variables are common to both degree and diploma courses, and certain variables are absent or not fitted for those students who are in the not enrolled category. For example, details of cost and financing of education. The study has taken the population enrolled for higher education plus those enrolled in diploma courses. The study has tried to find out various determinants of student's enrollment choice

into degree courses in higher education or diploma course into the system.

Table 1 Distribution of Current Status of Student by Gender

	Male	Female	Total
Enrolled in Higher Education	72.8	75.8	74.3
Enrolled in Diploma course	22.6	16.1	19.4
Not Enrolledanywhere	4.6	8.1	6.3
Total	**195**	**186**	**381**

Methodology and Source of Data

To understand the choice behavior of an individual student the primary data was collected. The study traced the passed out students from the graduated higher secondary school. Primary data were collected through well-planned survey in the sample district of Villupuram in Tamil Nadu. Tracer method was adopted to find out whether students enrolled for higher education or not. Proportionate simple random sampling is used at different stages of sample design for selected sample schools, sample students and by gender and specific groups in each sample school.A structured questionnaire survey schedule was used for data collection from two per cent of sample higher secondary graduate students in Villpuram district in the academic year 2008-09. Logistic regression is to identify the relationship between the independent variables and the probability of occurrence. This function is the logit function also called as log-odds function Demand for higher education in sample district, analyzed in this chapter, consists of two parts. First, the logit models have been used to estimate the factors that decide demand for higher education and the second part has predicted the probability of demand (enrollment) for higher education.

In this model a dependent variable indicates the present position of student after passing higher secondary schooling and have values 1 for "Enrolled in degree course" and 0 "Not enrolled in degree" (Enrolled in Diploma course). In this model 283 students opted to join degree course whereas 74 students opted for diploma course.

With the set of explanatory variables used in this model such as individual characteristics, socio-economic background of household, academic and ability factors-I & II and current enrollment factors of students etc.

Table 2 Variable description and Coding Pattern

Variables (Notation)	Description
Binary Response	
Model	
Student choice between enrolled in degree courses and diploma courses. **(ENROL_DEGEE (HE)**	Dummy variable that takes the value 0 = students enrolled in diploma courses and the value 1 = students enrolled in degree courses (higher education).
Explanatory variables	
Individual factor	
Gender **(GENDER)**	(0-1) dummy variable , the value 0 corresponding to female and the value 1 corresponding to male
Socio-Economic characteristics of the household	
Religion **(RELIGION)**	(0-1) dummy variable , the value 0 corresponding to Hindu and the value 1 corresponding Non-Hindu.
Social groups **(CASTE)**	(1-3) Discrete variables that takes the value of 1 if the students belongs to Backward Class (BC), 2 If the students belongs to Most Backward Class (MBC) and 3 if the students belonging to Schedule Castes/Schedule Tribes (SC/ST)
Father's Education **(FAT_EDN)**	(0-2) Discrete variables that takes the value of 0 if the level of father's education is up to elementary level, 1 if the level of father's education is between secondary to higher secondary level and 2 if the level is graduate and above.
Mother's Education **(MOT_EDN)**	(0-2) Discrete variables that take the value of 0 if the level of mother's education is up to elementary level, 1 if the level is from secondary to higher secondary level and 2 if the level is graduate and above.
Father's Occupation **(FAT_OCC)**	(0-1) Dummy variable that the takes the value of 1 if the father's occupation is salaried in either public or private sector and 0 if otherwise.
Mother's Occupation **(MOT_OCC)**	(0-1) Dummy variable that the takes the value of 1 if the mother's occupation is salary employed in either public or private sector and 0 otherwise
Income groups of the families **(INCOME_ GROUP)**	(1-5) Discrete variables that take the value of 1if the families belong to very poor, 2 if the families belonging to poor, 3 if the families belong to middle, 4 if the families belong to upper middle and the value 5 if the families belong to rich groups.
Annual Income of the family by groups **(INCOM_DUMMY)**	(0-1) Dummy variable that takes the value of 1 if middle, upper middle and rich income (proportion of annual income of the family more than .60 per cent) and 0 if otherwise (less than .40)
Saving habits in the family **(SAVE_FAM)**	(0-1) dummy variable , the value 1 corresponding to the family is having saving habits and 0 otherwise

Cultivation Land **(CULTI_LAND)**	(0-1) dummy variable , the value 1 corresponding to family having cultivation land and 0 if otherwise
Number of Siblings **(SIBS_FAM)**	Continuous variable showing the number of siblings in the family
No. of earning persons in the family **(EARNERS_FAM)**	Continuous variable measuring the number of earning persons in the family
Dependent of the family **(DEPEND_FAM)**	Continuous variable measuring the number of earning persons in the family
No. of siblings studying at present both at school and college level **(NSIB_EDN)**	Continuous variable measuring the number of siblings are obtaining education both at school and college
Previous education background and Scholastic ability-I	
Management of school by class 10 **(MAN_SCH10)**	(0-2) Discrete variables that takes value 0 if the students studied in Govt. school, 1 for Aided school and 2 for Private(unaided) school
Board of Examination in Class 10 Class **(BOARD_EXAM10)**	(0-1) dummy variable, the value of 1 corresponding to students who passed from Non-state board(Matriculation board, CBSE/Anglo-Indians Board) and 0 if otherwise (state board)
Percentage of Mark in Class **(PERCENT_MARK10)**	Continuous variable referring to the percentage of aggregate marks scored in secondary (Class 10) level
Previous education background and Scholastic ability-II	
Management of School by Class 12 **(MAN_SCH12)**	(0-1) Dummy variable, the value 1 corresponding to medium of instruction by English and 0 if otherwise (Tamil -mother tongue)
Percentage of Mark in Class **(PERCENT_MARK12)**	Continuous variable referring to percentage of aggregate marks scored in Higher Secondary school
Student Current Enrolment Status	
Type of Management (current) **(TYPE_MAN)**	(0-1) Dummy variable that takes the value 0 = students enrolled in government and aided higher education at institutions and the value 0, if otherwise
Financing pattern for education expenditure of the household	
Spending through family income only **(FIN_INCOM)**	(0-1) Dummy variable, the value 1 is equal to the household spending through family income only and 0 if otherwise
Getting student loan for Education **(STUDENT_LOAN)**	(0-1) Dummy variable, the value 1 if the student is getting student loan for current educational expenditure and 0, if otherwise

Results and Interpretations: Determinants of Demand for Degree Course Versus Diploma Courses

Logistic regression for student's choice between degree and diploma courses in higher education reveals a significant predictor for determinants of demand for higher education. The result reveals that there are four significant variables determining demand for degree courses in higher education such as percentage of marks in class 10 (scholastic ability), type of management (current enrollment), number of siblings getting education in the family and scholarship. To determine the significant factors by observing the Wald Chi-square value and to make a judgment over the direction of relationship by assessing the sign of estimated β coefficients, is just

the beginning of interpretation of logistic regression coefficients. As an alternative of representing the β coefficient directly, the parameter estimates of a logistic regression can be interpreted in terms of odds ratio which is simply the exponential transformation of β coefficient (Odds ratio =exp (β). The results by using the odds ratio are briefly discussed below.

Table 3 Result of Binary Logistic Regression for Student's Enrollment Choice between Degree Course and Diploma Courses

Significant Variable	B	S.E.	Wald	df	Sig.	Exp(B)
PCENT_MARK10	.073	.014	28.837	1	.000	1.076
TOMAGMNT_ENROL	-1.028	.419	6.011	1	.014	.358
NSIB_EDN	-.792	.156	25.885	1	.000	.453
SCHOLAR_SCHIP	.824	.371	4.942	1	.026	2.280
CONSTANT	-1.471	1.044	1.984	1	.159	.230

Scholastic Ability

Scholastic ability determines student's aspiration towards pursing higher education as individual concerns. The estimated β coefficient of percentage of marks in Class 10 here is 0.073 that results in odds ratio equal to 1.076. The regression coefficient (.073) and corresponding odds ratio (1.076) suggest that for each unit (one per cent) of increase in the percentage of marks in class 10, there will be an increase in the odds ratio of enrollment in degree courses compared to enrolment into diploma course by about 1.076 times.

Type of Management (Current Enrolment)

In the management as independent variable, private institutions is given a score of 1 and government as 0. The estimated β coefficient of type of management is as high as -1.028 which results in an odds ratio equal to 0.358. The regression coefficient has a negative sign (-1.028) which indicates that the probability of enrollment into degree courses, as compared to diploma courses decreases. The interpretation in terms of odds ratio reveals that if there was change from government to private managed colleges then the odds ratio of enrolment into degree courses decreases by a factor 0.642 (1-0.358) or by 64.2 per cent for each one unit of addition to private institutions, while controlling the other variables in the model. It means that more and more the number of government colleges the probability for degree enrollment was higher and if private institutions were small, higher the probability of enrollment into diploma courses.

Number of Siblings

Number of siblings getting education in the family is a significant factor to explain the likelihood of enrollment into degree courses for higher education. The odds ratio is = Exp (β) = 0.453 which explains that for each 1 unit of (one sibling) increase in the sibling getting education , the odds of enrollment into degree courses decreases by 54.7 per cent (1- 0.453) or by a factor 0.547 controlling other variables in the model. It means increase in the number of siblings decreases the probability of enrollment for degree decreases. This may be due to cost of education and duration of course.

Scholarship

The sample students received different types of scholarships such as merits scholarship, post-matric scholarships for SC/ST, MBC and agriculturist family with low income levels. Out of the total, 26.6 per cent of students have received different scholarships under various schemes. The regression coefficient of scholarships has a positive sign (0.824) which indicates that the availability of scholarships for the students will increase the likelihood of student's enrollment into degree course for higher education. The corresponding odds ratio (2.280) suggests that for each unit of increase in availability of scholarship, there will be an increase in the odds of enrolled in degree courses as against students enrolled in diploma courses by about more than two times. It means that availability of scholarships gives financial support or reduces the burden of education cost to students pursing higher education.

Scholarship, therefore, emerges as an important variable to determine degree enrollment for higher education.

Summary and Conclusion

The result of the model explained that student's enrollment choice between degree courses and diploma courses, it is determined by four variables influencing the students enrollment into degree courses such as percentage of marks in class 10, number of siblings in education, current enrollment by type of management and scholarship. The percentage of marks in class 10 and scholarship are positively associated with enrollment into degree courses; and number of siblings studying in a family and type of management where students are enrolled currently has a negative effect on student's choosing degree courses. Firstly, a student scores good marks in class 10. This motivates to undertake higher education like technical or profession degree courses in higher education. On the contrary, the student who scored low marks, was more likely to choose (choice) short-term and less expensive diploma courses and defer from higher education.

Secondly, students from poor socio-economic background are more dependent on government higher educational institutions to pursue higher education. They cannot go for high-cost private higher educational institutions. But there is a limit in the number of students admitted into government institutions and the rest have to go to less expensive short-duration (three or six months) diploma courses in private institutions. It reveals that more number of government colleges increases the probability for degree enrollment and higher the private institution, higher is the probability of enrollment into diploma courses.

Thirdly, more the number of siblings getting education in a family/household has negative effect on students enrolling for degree courses. They choose six months or one year diploma courses due to burden of cost of education and time. Where number of children in a family is more, the problems faced are also numerous like basic needs and hence higher education is ruled out. Finally, scholarships influence on student's enrollment into degree courses. It has motivated students to study

further and it also gives financial support or reduces the burden of cost of education on the household. The result may be varying in different region and different sample respondent in the system. The study has stressed that there is needed the research study in the area of individual choice between the high-cost of degree courses with in higher education and low cost of diploma courses which is immediately to get job opportunities in the system

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