Chapter - III

3. Higher Education system in Pondicherry - individual’s choice range and behavior

Educational system is highly complex. The cycle of production is long and the output is fed as input to the next stage. Hence, analysis of individual demand for course would be more realistic if the educational environment in which a student makes a choice, is taken into consideration.

3.1 Higher education system

Meeting the individual demand for various types and levels of education is considered as the prime objective of higher education. Higher education system is expected to respond to the felt needs of the society reasonably well without overly detailed manpower planning. It is observed that social purpose of education is satisfied when families or students choose the courses of their own tests and judgments. If each student chooses most preferred option and the system of schooling responds in the long run by reflecting favored options and eliminating those without adequate demand, the social purpose will be met. Students seem to make economically related choices as they are guided by labour market signals. If the government does not respond or reflect society’s choice, a fallacy of composition occurs as observed by Nicolas Glytos 1991 (page 9).
In the light of the above, educational reforms have been concentrated with explicit reference to individual needs and preferences - either to improve the educational institution's organization to adjust to student needs or to modify subject contents in order to cater to the needs of the individuals. Introducing new fields of study, integrating vocation and academic programs increasing the educational options by changing admission rules or streamlining organizational operation even at high school are some of the examples of educational reforms.

It is evidently clear that the type of educational system influences the choice behavior of students. The type of educational system open or closed in turn much depends on the nation's economic, political and social environment and the policies of the government. Education system in most of the countries, government interventions are required to provide education to the public or regulating the educational provisions by private institutions. Government intervention is not bad always but the degree of intervention that matters. The level is decided by the level of economic development, government budget and the degree of involvement by private educational institutions. However an analysis of the determinants of type of educational system is beyond the scope of this study.
3.2. Structure of Higher Educational System

The structure may be better understood through grouping of educational programs or institutions, i.e., grouping of students into common parts of the curriculum. The structure is also about organization separation between branches, lines, etc.

An educational system is said to be open as that of USA, since the choice range is wide and existence of high probability of enrollment is a course of choice for an individual. The curriculum is not rigid and therefore cross movement between courses even at the second year of the degree course is not that difficult. Further, the market factors of supply and demand play significant and dominant roles both in educational and labour market sectors and adjustments are quick between these sectors.

Alternatively, a closed educational system is more rigid in terms of curriculum and offers limited range of subject choice options. The supply of places is more decided by the government and its institutions and not as per the demand patterns. However, this does not mean that students do not have choice options but the range is limited.

In Pondicherry up to higher secondary stage, 10+2 system exists, wherein all the students are categorized as single group up
to 10th standard and then students are branched to various streams at higher secondary level otherwise called plus two stage. Presently the type of courses to be studied at plus two level are decided on the basis of marks obtained at 10th standard. Common branches/groups with core subjects offered at higher secondary level are.

I Group - Mathematics, physics, chemistry and biology
II Group - Physics, chemistry, biology/botany and zoology
III Group - Mathematics, chemistry, biology and home science
IV Group - Physics, mathematics, chemistry and computer science
V Group - Mathematics, physics, chemistry and commerce
VI Group - Physics, chemistry, biology, advanced english
VII Group - Economics, history and tamil
VIII Group - Mathematics, accountancy and commerce/economics
IX Group - Vocational subjects

The above list is not exhaustive. The Higher Secondary courses hence forth referred as HSC in this study, can be by and large categorized into academic and vocational. A student who opts for a course/stream with mathematics, physics, chemistry and biology as core subjects, is eligible to apply for all professional, science and arts and humanities courses at post secondary level, implying a wider choice range. In case of non-availability of higher level options like medicine, engineering, dental etc., the student can accommodate himself at least in the least preferred course than go all together without any course. Whereas, a student who opts for the stream with physics, chemistry and biology/botany
with zoology can not apply for engineering course at post secondary level. Take the case of a student who gets only the economics, history and tamil stream, he is not eligible at all to apply for professional and science causes. Therefore it is very clear that the range of post secondary options is basically determined by the type of stream studied at plus two level. The segmentation of students at plus two level is fairly water tight. Since the level of marks obtained by a student at tenth standard decides the type of stream at plus two level, and the level of marks and type of stream decide the type of course at college, students choice decisions take shape even at tenth standard. Bishop 1981 has also observed the students high school performance is at least partially controlled by the students and that the effort the students choose to put into high school will depend on their college going plans. That is why if a student does not get a group of his choice in a school where he studied, he migrates to another school. Probably this migration mostly occurs from the private to public schools. The compartmentalization at school level continues even at college/post secondary level. Admission eligibility is based on the type of stream studied at higher secondary level. The possible flow of student to various post secondary courses may be explained through the following chart.
It is seen from the chart that degree course at college can be broadly categorized into professional and general subjects.

3.3 Certain characteristics of Indian higher Education

a) Admission and selection norm:

Most of the educational programs have some sort of minimum requirement for entry. Since the number of places in professional courses specially in medicine are far less than the demand, number of devices of screening and filtering the aspirants are used. Admission is based on marks obtained in mathematics, physics, chemistry and biology, or entrance test
marks or both. In addition to these, quota of places for socially depressed sections have been fixed for the students belonging to backward classes, scheduled caste and scheduled tribe. Such a quota aims to provide equal access.

The restriction of places in professional courses especially in medicine is partly due to the financial constraints of the Government and partly due to the indifference of the Government to the individual demand. The vast gap between demand for and supply of places in medicine testifies the attitude of the Government. However recently due to globalisation of Indian Economy private participation has been permitted to set up and run colleges especially in engineering.

In science and arts and humanities courses, though places are reserved according to caste, the intensity of competition is not that high as the number of places available are quite large. Some courses in arts and humanities are to be supported by Government to continue even though there are no takers, because the teachers in these courses are to be supported for life.

In terms of curriculum, various fields of study are segmented, lacking interdisciplinary approach. The National policy on education 1986 of Government of India had stressed the need for reforms as the present system is rigid and less responsive
in terms of meeting the student needs and compartmentalized due to lack of interdisciplinary approach and lack of co-ordination and interaction between various disciplines.

b) Financial constraints.

Most of higher educational institutions are funded and controlled by central and state governments. The government domination generates two distortions

1. Excess demand in particular in professional courses due to subsidy of cost

2. Low capacity to generate sufficient funds within educational sector as the tuition fee remained very low for longtime.

3.4 Educational choice:-

In a rigid government dominated system, choice range is expected to be narrow, whereas in an open system, market approach to educational choice is likely to show greater diversity of choices to meet the individual requirements than public choice apparatus.

The question is whether students choice behavior is neutral to the educational system. The rational behavior of the student would mean that he would be neutral to type of educational system. However the range and type of choice available to a student would surely influence the nature and weightage given to a particular motive of choice and the ranking of motives would be different.
Unusually, there is a common element of agreement that greater choice is desirable in higher education. Choice is one of the major tenants of both market economy and democratic society. In a democratic society like India, families should have the right to choose the type of education that they want for their children. A choice of a course least preferred by the student, may result in small investment for the family as well as for the economy. Therefore educational choice mix should be optimum rather than lopsided either towards general subjects or to professional courses. Thus choice is considered to be something that is good in itself. The level of choice reflects the flexibility of educational system. But the questions are i) What should be the range of choice? ii) To what extent choice is beneficial to the individual and the society? Some choices are considered to be good for the individual but bad for the society and *vice versa*. Therefore, when we move from choice as an abstract process to a concrete one, we would encounter more complications. The choice situation would be more complex in horizontal choice decisions i.e. in the choice of subject or college. An ideal choice situation must mean i) right of the student to choose freely the course at college ii) existence of unlimited choices. However in reality choice cannot be unlimited.
The quest for greater educational choice is anything but simple. A system of too much subject choice containing a hodge-podge of courses is not desirable and at the same time a system with a few choices is also equally bad for the individuals as well as for the society. What is good for the individual is not necessarily good for the society. The existence of inconsistency between individual demand for courses and the society's requirements, warrant some sort of restriction on choices in terms of number of seats. Otherwise all the individuals would like to enroll only in certain courses like medicine and engineering, whereas the economy may not need so much of doctors and engineers and also may not be possible for the government to meet the demand.

3.5 Choice behavior of student.

Once choice is made and enrolled in a course, it is strategic as one cannot alter it subsequently without waste of time and additional financial commitments. Extending the traditional theory of individual rational choice to analyze social issues beyond those usually considered by economists is to incorporate into the theory, individual attributes, preferences and calculations. This kind of approach is a powerful tool at the micro level to derive implications at the group or macro level. Therefore a study of choice behavior is essential to understand to demand for courses. An individual's choice behavior is assumed to be rational i.e
individual will work out the relative costs and benefits between courses, before making a choice and choose that course which maximizes the net benefits. An attitude of indifference will occur when alternatives are expected to yield same net benefits. At post secondary level, education is not compulsory and hence a student has to choose the type course to study. Number of studies on individuals subject choice behavior in the USA, UK and Greece reveal that the behavior is rational since it is guided by maximization of utility or in more concrete terms maximization of expected salary. The behavior is based on rational expectations i.e expectations are *unbiased a priori*. Expectations may be of two types. 1. Adoptive and 2. Rational. The former is based on the present or on the recent past market conditions and the latter is based on expected future market trends. If the behavior is not rational, then it is said to be myopic wherein the individual does not take into account, the future expected effects of investments and attempts to maximize his current utility, disregard to future effects on his utility and also is unaware of the existence of bad effects.

3.6 Course choice sets.

A student has different types of choice sets at different stages of decision making. By choice set, it is meant to consist of certain number of courses, out of which, the student has to make a choice. The individual unit in a set is discrete and mutually exclusive. Different types of choice sets are a) Potential choice set, b)
Application choice set and c) Actual choice set i.e enrollment choice set. The inter-relationship is explained as below.

Consists of individual choices of courses
Say X1, X2, X3, X4, etc
The number of individual choices in this set is determined by the Higher secondary group/stream of study. A student with group I with mathematics, physics, chemistry and biology as subjects has maximum choices.

Consists of individual choices of courses
X1, X2, X3, X4, etc to which the individual submit his application. The number of individual choices in this set is determined by HSC Group/stream, HSC mark and caste of the student.

Consists of individual courses for which the student is offered admission, say X1, X2, X3, etc, out of which he has to choose one, to enroll in it.

The number of individual units i.e. courses in a choice set of a student gets dwindled, as the student moves from potential choice to application choice and application choice to enrollment choice.

Further, each student's choice set may not be alike in terms of numbers and types of courses.

3.7 Potential Choice:

This set consists of all subjects for which the student is eligible to apply, for instance, a student who has studied first group/stream with mathematics, physics, chemistry and biology subjects, is eligible almost for all courses in the post secondary education. The range of potential choice set is
determined by the type of stream |course studied at higher secondary.

3.8 Application choice set.

Soon after Higher Secondary results are announced or prior to that, a student, if decides to join a college, has to decide on number of courses/institutions for which application has to be sent. The range of application choice set is determined by higher secondary group studied and marks and also the type of caste the student belongs. Students could make rough calculations about their relative standing with others and minimum cut off marks for certain courses like engineering based on the information on the cut off marks for the previous two to three years. Generally the application decision is influenced by personal characteristics of students and his social economic status. Application decision analysis may suffer simultaneity bias and they may lead to inaccurate estimates. However if the application choices are ranked in the order of preference then the bias may be eliminated.

3.9 Actual choice set / enrollment choice set.

The actual choice set consists of names of courses for which the individual is selected by the institutions. Out of the selected courses, the individual has to decide which course to enroll. Once he reveals his preference and enrolls in a course, then he is said to have demanded the course. A student would not have even applied
for a course, though he would get selected had he applied. Notionally his choice set is supposed to consist of such courses also. This can be noticed among students who had applied for professional courses only. They would not apply for science course, because they might be sure to be selected in a professional course. The choice set at enrollment stage is assumed to consist at least two choices /courses including notional choices and they are mutually exclusive. Further the choice of course in the set is binary, since the process involves elimination. Choice set is assumed to consist choices ranked in the order of importance. A student selected for admission in engineering, dental and veterinary courses, ranks them according to order of his preference and enrolls in the most preferred course. The preference of one to the other is guided by exogenous and endogenous factors.

3.10 Choice analysis

Choice analysis of course by student is proceeded in this study in a nested fashion. The entire sample of students broadly categorized into three groups namely 1. professional 2. science and 3. arts and humanities. Since the choice trend existing in Pondicherry for number of years is towards professional and then only for science and arts and humanities, the following binary choice analysis is made in this study.

a. professional courses vs science.
b. engineering vs other professional.
c. computer science engineering/electronics eng. vs other branches like civil, mechanical, electronics etc.

d. science vs arts and humanities.

e. computer science vs other subjects.

f. commerce vs other subjects.

3. 11 Motives of choice.

Choice of courses by a student is motivated by many factors which are broadly classified as i) endogenous like individual student ability, taste and preferences, family background factors like education, occupation and income of the parents and social status of the student expressed in terms of caste. ii) exogenous factors like expected earnings, job opportunity and career prospects. Exogenous factors are mostly economic factors.

Motivational complexity leads to variability. It is unlikely that a pair of students who have selected the same course may not have the same level of benefit calculations and same ranking of benefit factors. For instance, if economic factors are weighed equally by students among various courses, then they are said to be indifferent in the choice of courses. However, it is postulated that economic motives are weighed differently by students according to their family background and status.

A student with poor family background would choose to enroll in engineering course more with a hope to get a job soon after
completion of the course than hope to wait until gets a good job with high salary. Whereas, a student with sound economic and social background would choose to enroll in engineering course with the expectation that it would enhance his status in the society. A middle class parent thinks that his main responsibility is to educate his ward so that it would facilitate his ward to get a job. In turn it would help him to arrange for marriage for his ward and settle him. This kind of approach of a parent is more apparent in India that too with parents with daughters. Recent analysis of students appeared for Indian administrative Service (IAS) exam in the year 1993 reveals that out of the first 20 successful candidates 18 were engineers and 1 was doctor. These candidates had expressed that they prefer IAS because of power attached to the post and the status it provides in the society. Therefore it is hypothesized that economic motives of students in choosing courses are ranked hierarchically according to the family background factors. This kind of ranking of economic motives are more apparent in the choice of professional courses. The ranking of economic motives is similar to the Marslow's hierarchical theory of motivation. Similar approach has been adopted by Lindevist in 1981 regarding savings behavior of individuals. The economic motives like, expected earnings, job opportunity, job mobility, career prospects and economic status can be arranged in a pyramid structure as detailed below.
The socioeconomic status which is a more comprehensive term than mentioned in the structure can be quantified as an index and the same may be related to ranking of economic factors by students.

This study while analyzing motives choosing a course tries to examine whether economic motives are related to family background factors. A relevant study by Papas and Psacharopoulos 1987 on Greece higher Education reveals that students' aspirations differ sharply according to the students' background and the type of school attended.

Psacharopoulos and Sanyal 1981 study on higher education in Sweden reveals that the desire for professional qualification as the most common reason stated by the students in deciding to go to
college. However, significant differences in motivation are evident even though all students attach greater importance to professional qualifications.

In Sweden, proportion of students stating 'need for professional qualification' was higher among the children of unskilled farmers and Government employees than among children of unskilled workers.
CHAPTER - IV

Educational Scenario of Pondicherry

4.1 Introduction:

Since the aggregate demand for education is linked with individual demand, it would be more appropriate to gloss over some macro socioeconomic and historical aspects of the study area with special reference to supply side of education in Pondicherry.

4.2 Union Territory of Pondicherry - its historical and demographic background:

Pondicherry had been under the influence of French terms of trade since 1654 A.D. The French settlers gained influence on this place, controlled it politically and ultimately took over it from the local rulers in 1816 under their control in all aspects, though lost the control for short spans to the Dutch and the English during 1761-1816 and regained their full control in 1816 and ruled till 1954. Pondicherry became a part of India and called Union Territory of Pondicherry in 1954 as per 14th amendment of constitution of India and comprises of four regions viz. Pondicherry, Karaikal, Mahe and Yanam, of which Pondicherry is the capital of Union Territory of Pondicherry.

The four regions are located in different places in India. Pondicherry, Karaikal and Yanam are located in the