

Is the Free Market Appropriate for Education?

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Abstract

In view of the fact that public endeavors are being replaced by private enterprises in almost all markets, and traditionally protected markets are being rapidly exposed to international competition, a look into sectors that were traditionally catered by public sector seems timely. Education is one such sector. This article looks into characteristics of the education service that are dissimilar to traits of other goods and services and attempts to find out the implications of privatization of education sector. Since privatization of this sector comes hand in hand with the free trade in education, and as free trade in education services essentially implies supply of education on a revenue earning basis, the implications of privatization and that of internationalization often overlap.

Key Words : Revenue earning, Distance learning, Virtual education institute, Educational software, Impediments, Collateral.

Introduction

Education, as many of us see it, is a service that holds a position of high honour in our hearts in relation to most of the other services; and so much so that we tend to doubt the ability of the market as a mechanism to distribute education in an ideal way (even though 'an ideal way' remains to be specified). But it is time now to question our belief. What is it about the 'market' that a service like

education cannot be left to it for distribution, when the same can be done for many of the other services? Is our suspicion justified?

This is a time of change. This is a time when not only market is replacing the state as a way of distributing almost all goods and services, but also protected domestic markets are being replaced by markets with internationally competitive suppliers all over the world.

Privatisation of education has taken steps from being a mere idea towards execution in many countries. The General Agreement on Trade in Services under the WTO has given opportunities for policy makers to open even services like education and health to the international markets. It is under this altering state of affairs that we make an attempt to explore the implications of provision of education through markets.

We present the debate and policy issues as connected to privatisation and trade in educational services. The debate focuses primarily on three connected issues, namely access to and quality of education that private vis-à-vis public education providers are expected to provide under a liberalised trade regime and the impact of privatisation on distribution of income. Education, being an instructional service, has not traditionally been thought of as tradable. However, with the General Agreement on Trade in Services in place, and Education being one of the many services proposed to be tradable, the issues related to trade in education also call for an examination. Trade in education essentially takes place with revenue earning / profit making as one of its objectives. Freely traded education is essentially not subsidised and rather runs on a revenue-earning basis. So the debate on traded education closely associate with the debate on publicly provided education, or those provided under a non-profit basis, vis-à-vis privately provided education for profit earning. The following sections of this paper attempt to trace the arguments, as obtained from theoretical literature on economics of education, with respect to provision of education on a profit-earning basis. Section 2 presents the development in the international agreement under WTO that is supposed to govern trade in education services and consequently influence the provision of education. Section 3 delineates the factors that dictates individual decisions /choices with respect to education services. Section 4 discusses how suppliers of education decide the price and quality of education to offer. Section 5 outlines the arguments on both sides of the debate on education provided with a profit earning and a non-profit basis with particular reference to the issues of quality of and access to education. Section 6 addresses equity and efficiency issues.

General Agreement on Trade in Services (GATS) and Trade in Education:

GATS specifies four ways in which service can be traded, known as the 'modes of supply', applicable to all service sectors including education. These modes are (mode 1) cross border supply, (mode 2) consumption

abroad, (mode 3) commercial presence and (mode 4) presence of natural persons.

Cross Border Supply (mode 1) refers to the provision of a service where the service crosses the border but does not require the physical movement of consumer or producer. This mode involves provision of service from one country to another via telecommunication or mail. Distance learning, virtual educational institutions, educational software, corporate training through information and communication technology (ICT) are examples of trade in education services under mode 1 or cross border supply. Consumption Abroad (mode 2) refers to provision of a service involving the movement of consumer to the country of the supplier. This mode includes the exchange of foreign students and students travelling abroad to study. Commercial Presence (mode 3) refers to the supply of services, where the service provider establishes or has a presence of commercial facilities in another country in order to render service. Affiliated universities, satellite or branch campuses etc. are examples of commercial presence (Sauve, P. 2002) Presence of Natural Persons (mode 4) refers to provision of services by persons travelling to another country on a temporary basis. As for education services, professors, teachers and researchers working abroad on a temporary basis would be considered under this mode of supply.

The market for education services supplied under mode 1 (Cross Border Supply) is currently relatively small as compared to that under the other three modes, but is potentially growing due to the increasing use of ICT. Mode 2 (Consumption Abroad) till now has been the most used mode of supply, especially in the post-secondary education level. As for mode 3 (Commercial Presence) and mode 4 (Presence of Natural Persons), strong potential for future growth is predicted. Comprehensive information on the presence of natural persons and cross border supply is lacking. Mode 2 is by far the oldest mode of supply of educational services. Trade in education services under this mode (consumption abroad) has been increasing in the last few years for most of these countries. Japan, Macao China, Malaysia, New Zealand and Russian Federation show a strong rising trend in this mode. Export of educational services via mode 3 (commercial presence) takes place through affiliated universities or branch campuses, located in the country of consumption. Comprehensive information on the size and number of affiliated universities is unavailable.

Five WTO Member countries Australia, Japan, New Zealand, Sweden and the United States have tabled negotiating proposals, to date, on education services

under GATS. With a closer reading of the proposals, two broad observations can be made.

Firstly, all five countries consider trade liberalisation in education to be beneficial both for importing and exporting countries. These proposals view liberalisation in trade in education services as a means of enhancing access to a wide range of educational options and improving quality of existing programmes through a 'competitive stimulus'. Australia and New Zealand identify some of the possible benefits accruing from internationalisation of education. Such benefits include; (i) fostering knowledge and appreciation of language, culture and societies of other countries that benefit students both culturally and professionally; (ii) facilitating exchange of ideas, experience and people that add a richness of diversity at national and international levels and contribute to international cross facilitation of academic knowledge; (iii) networking relationships among individuals, groups and institutions that can facilitate future economic, political and socio-cultural alliances; (iv) facilitating transfer of technology and (v) generating revenue for both private and public sector institutions. Japan recognises the possibility of collaboration in research between universities in different countries.

Secondly, all four proposals recognise government as the supplier of fund for and administrator of education services and as a regulator of educational policies. The proposal made by Australia emphasises that governments must retain their sovereign right to determine their own domestic funding and regulatory policies / measures. Japan's proposal recognises that many WTO Members reserve responsibility on primary and secondary education to the State, and in the course of liberalising trade in this sector government policy objectives should not be ignored. New Zealand emphasises the need to strike a balance between domestic education priorities and finding ways to liberalise education. United States proposal recognises that education, to a large extent, is a government function and addresses itself to countries that permit private education to supplement public education.

The Other Concerns Expressed in the Proposals Are as follows

Australia identifies barriers to trade in education restricting further liberalisation in this sector under all four modes of supply. In the 'consumption abroad' mode of supply, three sources of impediments have been identified (i) visa requirement and (ii) foreign exchange requirement, regulating the free flow of international students and (iii) qualification recognition issues that

deter students from joining overseas institutions. In the 'commercial presence' mode of supply, the impediments identified are (i) limits on ownership of foreign equity, (ii) lack of transparency in government regulatory policies and funding frameworks, and (iii) rules on twinning arrangements, which restrict the arrangement between institutions. Three impediments have been identified for the 'presence of natural persons' mode of supply. These are (i) visa issues and (ii) employment rules regulating the free flow of academics and (iii) restriction on the use / import of educational materials. The two impediments identified under 'cross border' mode of supply are (i) erection of new barriers as governments respond to growing use of Internet and (ii) restriction on the use / import of educational materials.

Australia further asserts that there are significant linkages between the regulatory frameworks governing the international trade in education services and those in other service sectors. Australia proposes that education services negotiations should be viewed within the context of a comprehensive 'service round'.

While Australia urges for removal of trade barriers under different modes of supply, it nevertheless proposes that the Member countries should be allowed to continue to determine their right to screen for temporary entry immigration purposes.

Japan's is the only proposal to express concern about the quality of education that is expected to be available in a liberalised trade regime. Japan emphasises that for any measure in the education service sector, the primary interest should be in maintaining and improving the quality of the service. This proposal makes three distinct points concerning quality of education services and accreditation. These are

1. Due consideration is required to formulate measures to ensure protection of consumers (learners) from low quality service.
2. Measures should be formulated to ensure international equivalence of degrees and diplomas offered by universities of different countries, of the same university in different countries and of the same university, but supplied under different modes of supply.
3. Because of differences in social background and the way education systems have been developed in different countries, educational systems and their administrative structures vary from country to country. Liberalising steps of trade in education should be coherent with structures of educational system in each country.

The proposal tabled by New Zealand recognises that education is a 'less committed' compared to other

service sectors because of the 'public good' element and the 'high degree' of government involvement. This proposal invites commitments in sub-sectors that may be less subject to sensitivities relating to the division between public policy and commercial activity than others. New Zealand suggests that an improvement or alteration in the classification of education services would facilitate identification of such services. The definition of 'adult education services' not elsewhere classified, and 'other education services' as classified in the Central Product Classification (adopted in GATS education services) is residual in nature. The present definition of these categories offers little guidance as to the range of services it is intended to encompass, and does not acknowledge the changes in the delivery of some education services. New Zealand proposes that these shortcomings might be addressed through the addition of an illustrative list to the present categorisation. This proposal identifies another source of ambiguity in the coverage of education agency services like student recruitment and placement services. New Zealand proposes the addition of 'agency services' into the present categorisation.

The United States proposal is restricted to concerns related to 'higher education', 'adult education' and 'training'. The use of information technology in educational services has expanded the scope of higher and adult education and training services as well as testing services. Such services constitute a growing international business supplementing the public education system. This proposal emphasises the importance of these services in enhancing productive efficiency of workforce. Like New Zealand, the United States expresses dissatisfaction with the present system of categorisation of education services adopted by the Council for Trade in Services. It proposes that coverage should clearly indicate that the two types of services; training services; and educational testing services, are included as part of the concept of education.

India's Commitments to the WTO Member Countries on Education:

As far as Education Services are concerned, India has made commitments of providing **Market Access** to foreign suppliers of Higher education only. Till now no commitment has been made with respect to primary, secondary, adult or any other levels of education. Even in Higher education, where commitments to market access have been made, are not unconditional. It is asserted that foreign higher education service providers under mode 1 (cross border supply) would be subjected to regulations as they are subjected to in their country of

origin. No condition has been imposed by India on foreign universities accepting Indian students, as India is an old participant in import of higher education through the "consumption abroad" mode. As far as the supply of education services under mode 3 (Commercial Presence) is concerned, India has promised to provide market access to foreign suppliers if the fees that they would charge are fixed by an appropriate authority and if such fees do not lead to charging capitation fees or to profiteering. Market access that India provides to the suppliers of foreign education under mode 4, that is, through temporary movement of professionals, is very limited and subject to 'unbound' limitations. Commitments with unbound limitations imply that conditions could be formulated any time in future and practically constitute "no commitment".

Apart from commitments related to market access to foreign service providers, member countries of the WTO also have to make commitments related to **National Treatment**, that is whether foreign service suppliers would be treated as favourably as the domestic suppliers of services, as in the case of market access commitments, India has made national treatment commitments only for higher education services. India has made commitments that foreign education suppliers through mode 1, 2 and 3 would be treated at par with domestic education providers. But GATS does not require member countries to treat foreign service providers as favourably as the domestic service providers through public service units. Therefore, India's national treatment commitment for education services supplied under mode 1, 2 and 3 implies that foreign education suppliers under these modes have to be treated as favourably as the private higher education suppliers and not as the public suppliers of higher education. Similar to the market access commitments, India has left options for 'unbound limitations' on national treatment to the foreign higher education suppliers through mode 4.

Implications of the GATS &, India's Commitments on Education Services Under WTO on Privatisation of the Education Sector:

We have seen above that as a member country of the WTO, India has made commitments to provide market access to foreign suppliers of education and also to provide national treatment to them. Such commitments have been made, though not unconditional, to education providers who would consider supplying education to the Indian market through the web, by accepting Indian students while being on their own soil

and / or by setting up an affiliated campus on Indian soil. Given the assumption that these service exporters will look for revenue while exporting education, it is easy to see that in the near future Indian higher education sector will see some new unsubsidised affiliated campuses coming up or new education providers operating on the internet on a revenue earning basis. These trends reinforce the present trend towards privately provided education in place of publicly provided education in many of the sub-sectors in education sector.

Individual Educational Choices

An individual or his family on his behalf, at different stages in life has to make decisions with respect to different educational options. The options are with respect to:

1. Whether to pursue a particular stage of education;
2. Which educational programme to choose; and
3. Which educational institute to join.

Education, from the point of view of a student, is an investment and consumption at the same time. In terms of the first and the second option, that is in order to decide whether to pursue a particular stage of education or a particular programme, a rational individual will decide positively if the present value of the associated benefits, discounted at an appropriate rate, are at least equal to the sum of present discounted value of the direct and the opportunity cost of doing so. The present value of benefits can be divided into two basic components; the expected value of stream of increased earnings that accrue from education, and the value of direct psychic consumption benefit from undertaking this activity either during consumption or in the future. The direct costs include charges such as tuition fee etc. The opportunity cost in turn will be the wage that could be earned at the best alternative job during the time spent in attendance at school or college.

With respect to the question on which educational institute to join, an individual is rationally concerned about the quality of the various institutes that he can get admitted to, given to his abilities and the tuition charges that he will have to pay. This quality of institutes that the prospective students are concerned about is purely a matter of perception of the student, and may not adhere to government's perception of quality of educational service. For example, a student might consider an institute as provider of good quality of education if the student quality of the institute is good, as a good peer group is conducive to better learning. Such perceptions can exist only for someone who is involved in the

transaction of the service. But from the point of view of the government or any third party involved in the transaction of the service, a good quality of education would imply a sizeable collection of books in the library, decent computational and informational facilities or a competent set of teachers. It is not that these latter facilities are any less important to the students; rather it is the third party (or government), which might ignore the importance of good peer group as a contributor to good learning. Even though, most of the time we find that institutes that have good facilities also teach a more able set of students, it is useful to distinguish between the different factors that affect the quality of education and relative importance of each of them conferred by different groups of individuals.

It is sometimes alleged Henry Hansman (1980), that consumers of educational services may be uninformed about the quality of education they are buying, at least prior to the transaction. So, some features of the institution serve as a proxy for institutional quality from the point of view of students. Some of the most common such features are academic / intellectual abilities of other students in the institute and the educational facilities provided in the institute Rogerson and Fernandez (1996). Empirical findings, Brewer, Edie, Ehreuberg (1999), Summers and Wolfe (1977) in fact, support the claim that resource and peer quality of institutions have positive correlation with the future earnings of students, given their own abilities. In case, the objective of obtaining education for a student is to enhance future earning prospects, the student may perceive the attributes of an institution that can be positively associated with higher future earning of students as contributing to the quality of the institution itself.

The Decision of the Supplier of Education Services

In this section we will focus on the price, quantity and quality choices of universities or educational institutions. How universities behave in these regards depends primarily on whether the educational services are provided by the university concerned with motive of earning profit or not. Profit earning may be a usual motive for private firms in other industries, but a large section of the educational institutes are exceptions to this phenomenon.

Let us elaborate on how non-profit educational institutes make price, quantity and quality choices. It is not claimed that non-profit organizations do not ever earn revenue larger than their total cost of production. Rather they satisfy a "Non-distribution constraint" Henry

Hansman (1980), Winston (1999). That is to say that there is no outsider to whom the enterprises can legally distribute those profits, like firms distribute profits to its owners. A non-profit organisation has no owners it owns itself. Of course, the behaviour of a non-profit organisation must respect the fact that its total costs cannot long exceed its revenues. Winston (1999), attempted to explain the reason behind such dominance of non-profit 'firms' in the education 'industry'. In a market where customers are little informed about what they are buying, they might feel that they are vulnerable to poor quality education by organisations running on profit motive. The non-profit structure of suppliers is expected to reduce suppliers' incentives for the opportunistic behaviour. Hence, consumers grow preference for non-profit suppliers.

There are two broad categories of sources of revenue for non-profit institutes. Donated revenues or contributions from charities (or subsidies) and commercial revenues. Donated revenues are the result of various charitable motives of their donors. Such motives include a dedication to equal opportunities under the belief that education is a human capital investment, access to which should not be restricted, an appreciation of the externalities of educated citizenry, an alum's sense of obligation to repay past subsidies, a desire to improve the reputation of ones own institution and to "bathe in the reflected glory of an improving alma mater" Winston (1999), commercial revenues, on the other hand, are primarily earned in the form of tuition receipts and research contracts.

In contrast to profit firms, non-profit education suppliers can and often do sell their product at a price below the average cost of its production. This has been a defining characteristic of non-profit organisations in education sector all over the world.

Lets us now turn to the quality and quantity choices of non-profit educational suppliers. Any educational institute that has access to revenue either in the form of charitable revenue or subsidies can charge a price below average cost, but it will do so only if this sort of pricing serves towards fulfilling at least one of the institutes objectives. The objective of profit maximising institutes is obvious. It is difficult to say, what objective non-profit organizations serve. But, improvement or maintenance of reputation surely is a driving force behind many non-profit educational institutes and determines their choices with respect to price, quantity and quality.

Any supplier interested in its reputation among prospective students is likely to act on enhancing what students perceive as quality of education. The

'technology of production' of instructional educational services, is such that customers are used as inputs. Better is the quality of customers, better is the quality of production, given the quality and quantity of other inputs. Different customers bring in different measures of students quality. This is why institutes have strong incentives to care about the identity of those whom they sell their services to. Institutes are able to do this through creating an excess demand and selecting those who possess higher measures of the desired qualities. This is possible if the tuition fee that non-profit supplier charges is less than the market-clearing price. Tuition fees of these institutions are thus not market clearing prices of educational service, in the sense that they do not indicate scarcity of a product and willingness to pay to the consumers.

Below-cost-pricing, in fact, is observed to be the pricing behaviour of many reputed institutes of higher education in the United States. Winston (1999), shows that there is, in fact, a negative correlation between the rank of a university in the US and the price / cost ratio, and a positive correlation between average student quality (measured by mean SAT score), and the average student subsidy that these institutes receive.

As far as the pricing of education service is concerned, discrimination of price among students is also a practice worth mentioning among educational institutions, public or private, for profit or not for profit. Transferring part or all the tuition charge, living costs of some students in the form of scholarships, cash grants, providing industry sponsorship and tax relief on certain kind of educational expenditure are various forms of price discrimination. It is to be noted that the price discrimination is different from the way a profit-maximising firm would discriminate prices between consumers with differing elasticity of demand. As we have mentioned, production of education services involves technology that uses customers as inputs, and the presence of some students may be especially desirable to the school / university over others. Larger the proportion of students of a higher quality present in the class, better would be the quality of education as perceived by the consumers. Therefore, any educational institutions, with some concern about the quality of its service or its reputation would like to draw higher quality students or more able students by asking a lower tuition from them.

Quality of Education Provided by For-Profit and Non-Profit Providers of Education

The previous section indicates that non-profit educational institutes / suppliers are able to, and often

do offer education service at a price lower than that of the market clearing price, thereby creating excess demand for their services so as to select higher ability students and provide a peer quality that would enhance the overall quality of service, given qualities and quantities of other inputs. Does this imply that for profit education suppliers provide poor quality of service than non-profit suppliers? Before we attempt to find an answer to this question, let us explore the meaning of educational quality and the ways to compare the qualities of the educational services offered by the suppliers.

Quality of a product is judged by its "fitness for purpose" i.e., by deciding if the product fits some predefined purpose. This definition of quality is commonly applied to products of the manufacturing industry. There are some problems in applying this definition directly to education. To adjust the "fitness of purpose" definition to the needs of education, one needs to specify the variety and purpose of education. Agreement on what purpose of education should serve is probably not possible. The consumers, the 'industry' that employs the graduates, and the government may have different notions of the purpose of education. The industry's view about purpose of education is possibly to produce graduates who can "communicate and cooperate" with others, "solve problems", "contribute to the organization's output" and have the social skills to perform well as a member of the team" Montmore and Stone (1990). In consumer's perception, the purpose of education is possibly to enhance their future earning and provide psychic benefits both during and after acquiring education. The government's perspective about purpose of education may be to enhance aggregate student achievement. Purpose of higher education also includes acquisition of knowledge on which to base professional judgments, building of a value system against which to make personal, social and moral judgments etc. Wicks (1992). Whether achievements of these purposes are difficult to observe and whether they are measurable or not, is questionable. Even if they are, the measure is more likely to be accurate the later in life that it is taken, and the whole effect is probably most accurately measured in retrospect.

This discussion suggests that if it is necessary to use such a term, as quality for educational services, it has to be done with caution. Educationists Montmore and Stone (1990), suggest that there is no uni-dimensional measure of quality and it is possible to discuss the quality of different components of education. Some of these components can be measured and their quality assessed. Montmore and Stone (1990), suggest four of such measurable

components:

1. Pedagogy or Quality of teaching,
2. Resources available to the institute,
3. Achievement or outcomes measured by the results of tests taken by the students,
4. Subsequent achievement of students measured by employment status investigated after some years of leaving the institution.

The literature on economics of education, while debating about the possible quality of education offered by educational institutes running on a profit motive vis-à-vis a non-profit one refers sometimes to teaching quality, sometimes on students or peer quality and in other instances to students' achievements.

Adam Smith was probably the foremost of all economists to analyse quality of performance of educational institutes. Smith primarily referred to teaching quality as the quality of education and in this connection compared the educational systems of Scotland and England. Scotland's educational system was relatively market dependent where teachers' income depended on the number of students they could attract, while English schools were supported with endowments. Smith believed that the quality of teaching in a market oriented education system would be better than that offered in a non market oriented system, because the former would produce attributes required by the students and the latter attributes decided by the donors. Smith's notion of educational quality adheres to consumers' perception of quality. His argument is based on the assumption that consumers possess perfect information about, and can judge the quality of education, and donor's perception of quality differs from that of the consumers. This argument was contested by J.S. Mill, who pointed out that consumers of educational services are often not aware about the quality of the service they are buying and hence, cannot influence the teaching quality through their preferences. Even if consumers are well informed and are in a position to judge teaching quality, whether teaching quality in institutions with endowments (private donor grants) is higher than in those without endowment, depends on the extent of donations that depend on teaching quality. In case donations respond positively to teaching quality, endowments do not insulate teachers from market forces.

Brown (2001), has noted that for institutions of higher education, which are jointly involved in research activities and teaching, a very common criticism of provision of endowments is that increased research activities divert attention away from undergraduate

teaching. This argument holds only to the extent to which teaching quality and research activities are substitute. Comparison between research activities and teaching quality would reverse the argument in favour of endowed institutions.

This discussion suggests that whether endowments (public subsidy or private donations) raise teaching quality or not, depends on the extent to which they are connected to the consumer preferences and the extent to which consumers make informed choices.

Quality of education, as we have noted above, can also be measured by the resources available to an institute. For a given level of earning from tuition charges, endowments raise the amount of resources available to an institute. In that case, subsidised institutes would be expected to deliver a better quality of education, as measured by the amount of resources available. In case, tuition levels are lowered as a response to increased endowment, quality of education is not necessarily be expected to be higher in endowed institutes. In institutions appropriated by the state, subsidy is used to set tuition levels below average cost of production. In order to satisfy the preferences of the median voter, state legislators have an incentive to make education available to as many of their constituents as possible. In that case, while subsidies may successfully increase educational access, they are likely to decrease the average quality of education measured in terms of resources per student. For institutions, receiving government funds, but not under direct appropriation of the state, the pressure to increase the number of students and satisfy the preferences of the median voter is less intense.

We have noted above that another way of assessing quality of education, offered by an institution, is to assess the achievement of its students either in the examination at the end of the curriculum or after some years of leaving the school. Economic theory, in this area, views student achievement also as achievement in the labour market, measured by future earnings. It is assumed in economic theory that achievement of a student in the labour market has a bearing on the years of education and quality of education. How far this assertion is true is a matter of debate, which will be briefly discussed later in this paper. For now, let us stick to the assumption that student's achievement is positively related to school quality. Epple and Romano (1998), and Basu (1989), formulated models supposing peer quality as the quality of school, and that quality of school affecting 'student's achievement' positively. Thus, a better peer quality implies superior quality as measured by 'students' achievements in their models.

Basu (1989), explains how a profit maximising behaviour determines the quality of a school as assessed by its peer quality. Epple and Romano (1998), explored a school's quality choices under a competitive market structure with an alternative choice of a free public school for the students.

A profit maximising school chooses the quality of students, so as to maximise profit. Consumers should be willing to pay a higher price if a school is offering a better quality. When the quality of school is assessed by peer quality a better quality of a school can be obtained by choosing a set of students of ability above a certain level. A profit seeking school then, would like to choose to admit the best available student, charge whatever that student is willing to pay, and thereby, making the private school sector consisting of large number of schools with one student each. But, given that building and operating a school requires fixed costs, the size of schools are either fixed by capacity constraints or determined by the minimum average cost of production. A school would then like to fill in as many seats as possible so long as the number is less than or equal to the 'size' of the school. To explain the behaviour of a profit seeking school in simple terms, let us assume that students are divided into two categories 'clever' and 'mediocre'. To offer a high peer quality of the school, only clever students should be admitted. In that case, a high price can be charged. But, in a class divided society all clever students may not be willing to pay the same price. Let us further divide the students into rich and poor classes so that we have effectively four categories of students The clever rich (cr), the clever poor (cp), mediocre rich (mr) and mediocre poor (mp). The high-income families are likely to be willing to pay a higher price than the poor, either because the rich have access to 'cheaper' money, Basu K, (1989), or they may be able to utilise education to achieve more than the poor of same ability Epple and Romano (1998). Thus, a profit seeking school would like to fill in all its seats with students who are both clever and rich. In case, the number of clever-rich students willing to join the school are not large enough to fill in all the seats then the school admits all the rich clever students. The rest of the seats can be filled in either (a) by some clever-poor students or, (b) by some mediocre rich students or, (c) by admitting some of both. Option (a) will result in a higher peer quality and induce students to pay more. Option (c) will pull down the student quality. In absence of price discrimination, the presence of poor students (in case option (a) or (c) is chosen) will pull the price down to the level that the poor students are willing to pay. Option (b) will result in a lower peer quality but presence of only rich students will push the price up given that peer quality.

Which peer quality the school will offer depends on the disparity between the 'willingness to pay' of the rich and the poor and the responsiveness of price to quality enhancement. Note that mediocre poor students will not be admitted since they reduce the peer quality and are willing to pay lower price than their rich counterpart. If schools are allowed to discriminate price, they will then stick to option (c) and charge discriminatory fees from rich and poor students. The presence of clever - rich and clever - poor students will enhance quality, thereby, raising the willingness to pay by all students and hence the profit. The price that the mediocre are willing to pay rich will compensate for the lower price that the clever yet poor students pay. This kind of price discrimination internalises the externality that clever - poor and mediocre - rich students create within the school, Rothschild and White (1995).

Basu's exposition suggests that if schools cannot engage in price discrimination, profit seeking activity leads to lower peer quality schools, if disparity between the rich and the poor in terms of their willingness to pay is large. In this circumstance, if price discrimination is allowed, profit seeking behaviour of schools can lead to a better peer quality than under uniform pricing.

It should be noted that the possibility of price discrimination arises only if number of clever-rich students in the society is less than the total number of students that the school can admit. This assumption is unlikely to hold, especially in populated countries. Moreover, whether an applicant is considered to be 'clever' or 'mediocre' might also depend upon the economic background of the applicant. In case the merit of a student is assessed from his performance in examinations taken prior to admission in an institute, a student with a favourable economic background may appear to be 'clever', whereas a student with a poor economic background may appear to be 'mediocre'. In societies where education is obtained for a price and economic background of families have any bearing on the time and effort the child puts into education, it is likely that a large proportion of rich students are 'clever' than that of the 'mediocre' and the converse is true for poor students.

Now, the question is, will a for-profit institute provide a better quality of peers than a non-profit public school? The answer would depend on the objectives government serves through the education system. Epple and Romano (1998), postulate that public schools are meant to provide education to all students irrespective of their family income levels or ability. To that end, public schools offer free education and all students can be admitted to the collective of public

schools. Thus, in absence of any other school, quality of public school, as measured by peer quality, is the average quality of all students. With this sort of a public school system, if private profit-maximising schools are allowed, such a school will provide a better peer quality than the public school, by choosing to admit students with high abilities to fill in its seats. It might seem surprising that students with an alternative choice of free education will choose to join the private school where they will have to pay a price. This is feasible as the private school chooses to offer a better peer quality than the public school.

As soon as a private school selects students from the top of the ranking of students according to ability, the peer quality in the public schools is expected to fall further below compared to what it was in the absence of the private school. Such a market allows new private schools to enter the market. As long as they can result in a peer quality that is better than the public schools, there will be some willing students to take admission and pay a price. Epple and Romano's proposition supports the concern that private schools will operate to the detriment of public schools by siphoning off higher ability students from the prospective pool of applicants. Epple and Romano also show that if privatisation of schools are allowed, it will result in a school system with private schools, arranged in a hierarchy of quality. Each school will choose students with different income ability combinations rather than the other schools and no two schools will offer the same peer quality. If there are two schools sharing students from the same income ability combination, one will gain by moving to a group with a lower income but the same ability or with a lower ability but of the same income level.

This assertion of Epple and Romano that profit-maximising schools will be of a better quality, has a bearing on the assumptions that public schools admit all students, since the government is not concerned about the quality of public schools as long as they provide education. It is not obvious why public schools cannot sort students according to their ability as the private schools do.

Issues of Equity, Access and Efficiency

The market mechanism distributes commodities on the basis of a market price. The market price indicates the degree of scarcity in the supply of the commodity and the consumers' willingness to pay. Any individual with a willingness to pay less than the market price, is unable to access the commodity, whereas any producer of the commodity who cannot produce it at an average cost

less than or equal to the market price ceases to be a part of that market. International trade in any commodity, including education, occurs with a purpose of earning revenue. Implementing free trade, with no intervention of the government, leads to the adoption of the market mechanism. This is true for any sector including education. The normative concern about applying the market mechanism is whether such mechanism results in an efficient allocation and equitable distribution of educational services. There are some features of educational services that compel economists to reconsider the efficiency and equitability aspects of the market mechanism for this particular sector. This section delineates the efficiency and equity effects of application of the market mechanism to the education sector vis-à-vis system of below-cost-pricing.

Application of the market mechanism to the educational sector would mean that educational services would be allocated to consumers according to their willingness to pay. An individual's willingness to pay for education is determined, among other factors, by his ability to pay and the consumption benefits and investment returns he expects by receiving education. In that sense any positive price of education, would eliminate those consumers (students) from the market, who are not able to pay that price. A reduction in the price (tuition) of education makes it accessible to a greater number of aspiring students. A profit-seeking supplier of education, who does not discriminate price, would not charge a price below the average cost of production. As we have discussed in the previous section, a profit-seeking supplier of education may discriminate price, if such price discrimination improves the peer quality and thereby, allows the supplier to raise prices charged from students with better economic background, or with lower ability. It was pointed out that such pricing behaviour is possible only if the number of 'able' applicants with favourable economic background, in the society, is less than what a school can accommodate. Hence, if education is supplied only by profit seeking suppliers and the number of 'able' students who can pay for average cost are larger than what schools can accommodate, access to education would be limited by the average cost of production. It is more likely than not that number of 'able' students with favourable economic background in the society is larger than what an institute can accommodate. Therefore, price discrimination by profit earning institutes can be considered to be less likely. *Even if a profit maximising institute admits some students at a price lower than the average cost, access

will be limited to only a few financially poor students with ability higher than the average peer quality of the institution. In such a situation, state financed and subsidised universities, or those with donated endowment, can charge a price below cost from all students and thereby, make education accessible to students who cannot pay the market price but can pay the subsidised price. The extent that this price can decrease below cost, is limited by the subsidy or endowment available to the university. In countries, where government aims to provide access of higher education to all qualified students, the adverse impact of limitations on subsidy is mainly on quality (measured by resources available to institutes) of state financed institutes (for example, in USA). In countries where qualified students are selected for higher education so that a high quality system could be maintained (for example, in UK), the subsidy constraint affects access for students with lower ability, Barr (1993).

Thus, a market price for education is likely to limit access on the basis of parental income, and a below-cost-pricing system with limited subsidy or endowment, either limits access on the basis of performance at the end of the previous level of education or limits the quality of education (measured by resources used on each student). Both systems can limit access to education and governments have to make a choice between the two. This choice should be based on the objective that the government would like to cater to. The objectives of equity and efficiency are two most common concerns of economic theory. We take up these issues in the following subsections.

Equity in Distribution of Educational Opportunity and Income

Inequality in opportunity for education can result from differences in material inheritance, differences in genetically determined ability as well as from differences in family background. Education system with a market determined price is certainly less effective than the system with below-cost-pricing, in correcting inequality of opportunity arising from differences in material inheritance. Very few would argue either for the equalisation of opportunities across genetically determined abilities, (or for the means to do so), as far as opportunities for education are concerned. To the extent, unfavourable family background for educational performance and lower family income can be correlated, the market determined pricing system is less effective than the below-cost-pricing system in

* Though provisions of scholarships etc. are not unusual in education at all levels, how much of that is a consequence of profit maximising behaviour is doubtful. Building or enhancing reputation is an important consideration among educational institutes. Grant of scholarships etc. act as instruments towards that end.

correcting inequality of opportunity arising due to differences in family background. Differences in family income can cause inequality in educational opportunity, if capital market for education loans function imperfectly. To the extent that they do, equality of opportunity can be achieved not by pricing below cost but by directly addressing the capital market, even without a system of below-cost-pricing.

As for the distribution of income, it can be argued that the market mechanism is an inferior choice than the subsidised or below cost pricing system, to the extent to which higher education causes higher earnings.

Whether education causes higher earnings is a debatable issue. Correlation between higher personal earnings and more years in schooling are frequently observed, though may not be a universal claim. The proponents of the "Screening hypothesis", Bowles and Gintis argue Mark Blaug (1985), "effective performance in most jobs depends very little on directly usable cognitive skills acquired in schools and much more on certain non-cognitive personality traits. Moreover, these personality traits are also rewarded in the class room and hence, are systematically encouraged by the educational system". It cannot be denied though that many professional qualifications do involve elements of cognitive knowledge that is indispensable to the job. The "screening hypothesis" asserts that employees face considerable information costs in recruiting workers and assigning them appropriately to different tasks; educational qualification acts as a signal to prospective employers about the applicants productivity. Thus, according to this hypothesis, higher education can be associated with higher productivity and higher earning but does not cause it. The 'human capital theory' Becker (1964), in contrast, envisages education as a cause of enhanced productivity, and hence, higher income.

To the extent, acquisition of education causes increased earning of those who acquire it, subsidising the results in an increase in earning of the individual, who would not have been accessed education with a market determined tuition fee, relative to what it would have been in the absence of the subsidy, although not necessarily in relation to others. In this sense, the below-cost-pricing system vis-à-vis the market determined tuition fee, results in lesser inequality in future income.

There are several counter arguments to this. Consider a tax financed subsidised education system, where subsidies are financed by tax collected from all income strata. Such a system, would distribute income from low-income groups to some future high-income groups,

if higher education were associated with increased future earning for those who have acquired it. It is advocated that a 'graduate tax' system would improve distribution of income Garcia Penalosa and Walde (2000). A 'graduate tax' system can be characterised by a subsidised education system, where high earning university graduates pay a proportional income tax, and more than compensate for the subsidy they received.

Efficiency Issues Connected to Market Mechanism in Education

This section attempts to outline some of the features of the 'educational services' that explain why the market determined price for education may fail to generate socially optimal outcomes. It also identifies the factors that prevent the subsidised pricing of education from achieving certain social objectives.

If households and firms act perfectly competitively, the market mechanism generates Pareto efficient outcomes in absence of externalities and uncertainties. Literature on economics of education identifies chief characteristics of the education sector that may cause the market mechanism to yield socially (Pareto) inefficient results. These characteristics are:

1. Presence of externalities
2. Uncertainty in human capital investment and
3. Intergenerational welfare comparisons that may not be adequately made in current generation markets.

Production and consumption of education involve external benefits, arising in two ways. Firstly, the society as a whole gets benefit from what can be called an 'improved citizenship' of the 'educated'. Secondly, assuming education enhances productivity, and hence future earnings of the educated, the future generations benefit from their increased tax payments. Given that parts of these benefits do not accrue to those who invest in education (that is the students), under a free market, demand for education may be less than the social optimal level.

Another reason that demand for education is deficient, compared to socially optimal level, is that there are a number of uncertainties involved in investing in human capital, arising from the nature of educational production and lack of information about the aggregate demand, and its composition, for educated labour in the future. In the absence of these uncertainties, students would be willing to invest more than what they invest in their presence. From the perspective of students, uncertainties arise from two sources. One source is the instructional nature of the educational production. In such a system of production, the student remains

unsure about whether he has the abilities to get benefit from a particular curriculum or not, and if at all, how much benefit he can get. The second source of uncertainty is lack of information about future demand for labour graduating from a particular curriculum / programme. In absence of this information the student remains uncertain about his future earning and employment prospects.

The risks associated with the above mentioned uncertainties, call for some market intervention if such risks cannot be exchanged for a market price, i.e., if the market fails to provide insurance to the holders of those risks, or when it provides insurance, it does in a limited way. Nerlove (1972), points at the asymmetry of information between the student and the prospective insurance company, as a reason for the existence of this failure. There is a 'moral hazard' problem associated with the insurance contract. This arises, due to the possibility that the insured might not take up a job that is monetarily remunerative. This problem arises because, the event of not obtaining a remunerative job may be the result of some 'unavoidable risk' against which the student is willing to insure herself, and / or the 'decision' to take up a job with higher non-pecuniary psychic benefits compensating pecuniary losses.

The market mechanism, in presence of uncertainties, for the above-mentioned reasons generates a deficient demand for education as compared to the socially optimal level, unless the high risk involved in educational investment is accompanied with high return. Lower uniform tuition charges is a traditionally prescribed policy that is claimed to raise students demand for education by reducing the cost of education, and thereby raising the net return on educational investment. Merit scholarships have similar incentive effects on educational investment of students with superior academic records. Since, admissions with uniformly subsidised tuition fees and merit scholarships are based on past academic performances, certain other kinds of 'moral hazard' problems can be associated with such form of government intervention. Students have the choice of putting different levels of effort on education, once the 'contract' of scholarship or subsidised tuition charges is granted. In that case educational production would be unable to raise the productivity of educated labourers for the labour market, to the extent that they do, in absence of the moral hazard problem associated with below-cost-pricing.

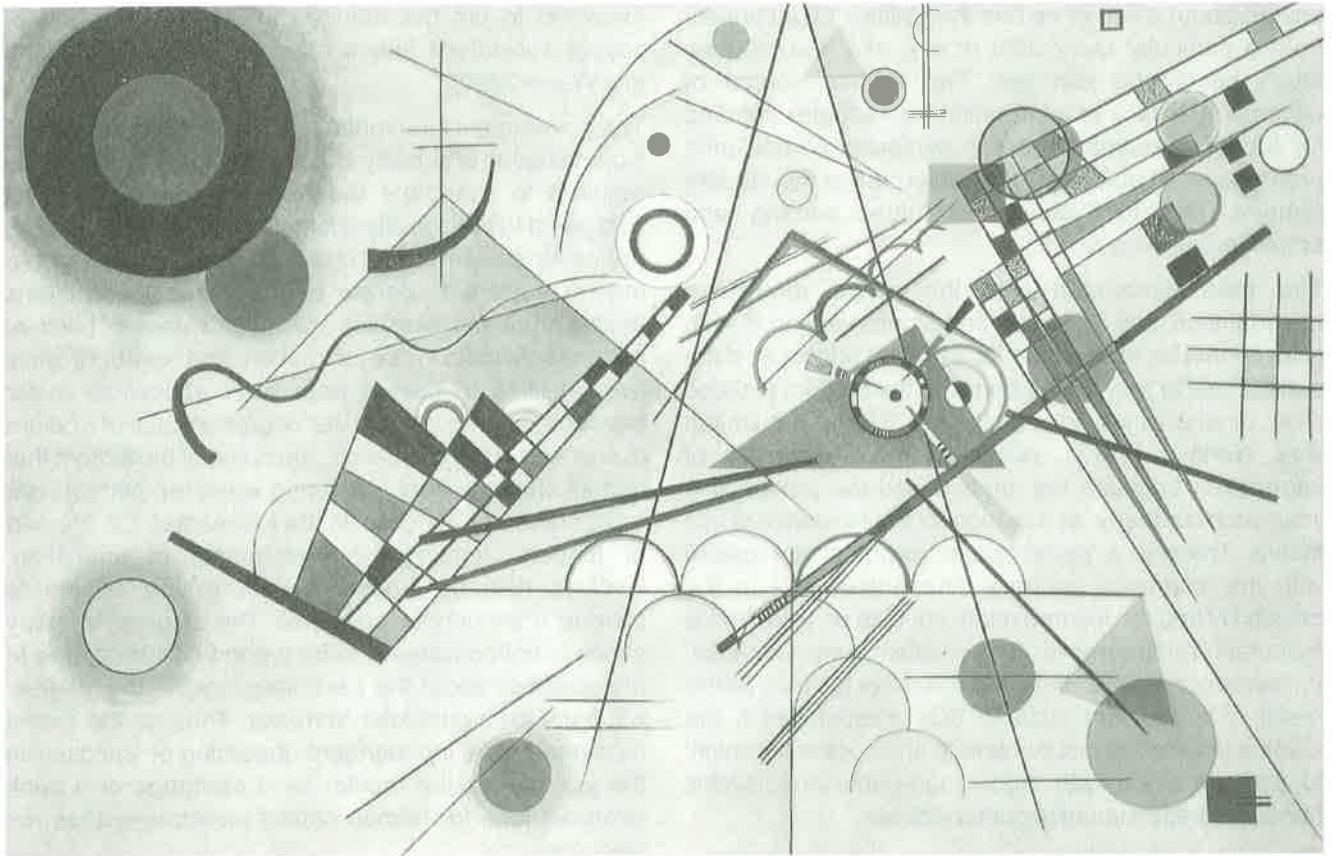
The moral hazard problem of subsidised tuition charges and scholarships exist as long as the students are not made liable to a repayment of the subsidy. A 'graduate tax' imposed on those who acquire higher education is

expected to put the required liability on the student paying subsidised tuition charges, (Garcia Penalosa and Walde 2000).

The government intervention, in the form of a subsidy or a combination of subsidy and graduate tax, would not be required to overcome the deficiency in demand as compared to the socially optimal level, if capital markets (those for student loans) operated perfectly. But such a market does not operate perfectly due to problems arising from uncertainties mentioned above. Lack of information about future job market, and / or about one's own abilities to benefit from what education sector provides, inability to trade the 'degree' in case of a failure to succeed in the job market, are some of the factors that restrict students from borrowing when repayments are independent of 'success' in the job market. On the part of lenders, lending for investments in education, involves risk, as student borrowers are unable to provide a security or collateral. The 'degree' in many cases is not considered to be a good collateral, due to uncertainties about the pecuniary income the 'degree' will fetch for a particular borrower. Thus, to the extent repayments are independent of earning or 'success' in the job market, the market for a mortgage or a bank overdraft loan for human capital investment does not work perfectly.

Friedman (1962), identified that a loan system that made payments conditional on 'success' in the job market would induce students to borrow for investment in human capital. Friedman (1962), Barr (1991) etc. prescribed an 'income contingent loan system' under which governments would grant loans on condition that the student would pay the lender a specified portion of his future earning, in excess of the principle amount, if his earning exceeded a threshold value, whereas low earners make low or no payments. Barr (2004), pointed to some of the advantages that 'income contingent loans' have over other forms of funding. Under this loan system, borrowers with low lifetime earning may not make full repayment. Thus, borrowers are protected from excessive risk. Lenders are protected from losing, if they expect to get back more than their initial investment from relatively 'successful' individuals, which compensate for the failure to recoup his original investment from the 'unsuccessful' (Friedman 1962).

Nerlove (1972), identified that income contingent loans, though can address the problems of moral hazard faced by the insurance company, it cannot take care of the adverse selection problem the insurance company might face. Since repayments on income contingent loans are proportional to earnings, it does not reduce the incentive of the student to take up a remunerative job.



Thus, any deliberate decision to take up a less remunerative job (with more psychic benefits) is less likely from the insured student after the insurance contract has been signed. Hence, the moral hazard problem of the insurance company can be partially taken care of by income contingent loan repayment system. Some students may have a poor prospect of earning, either because of self recognised lack of ability, or because they feel likely to choose low paying occupations on account of the value they place on the non-pecuniary benefits associated with such occupations. Students with these characteristics are more likely to borrow under an income contingent loan repayment scheme than those with a high-income prospect. This is the 'adverse selection problem' that income contingent loan repayment schemes involve.

The discussion, so far, points to some of the problems of charging a tuition fee, determined by the market mechanism. Presence of positive externalities and uncertainties in educational investment that cannot be completely covered by insurances (even of the forms of an income contingent loan repayment system) are the chief sources of inefficiency of market determined tuition fee.

On the flip side, there are inefficiencies originating from

not allowing the tuition fee to be determined by the forces of demand and supply. Nerlove (1972), argued that a tuition charge that leaves an excess demand for education may restrict the variety of services offered by the sector. Essentially, the argument is that the decision of what is to be produced is confined to a narrower group (the providers of education) with more homogenous preferences than the society at large if tuition charges are not market determined. Under a market mechanism, the preferences of the consumers for the product are expressed through their effects on prices. With subsidised tuition fees students are less able to do so. According to Nerlove, it is plausible that product diversity will be diminished in at least some dimensions as a result of this subsidised pricing system. As it is, there exists some asymmetry of information about the value of what is produced in the education sector and what could have been produced, but not produced, by particular institutions, between students and suppliers of education. In presence of this informational asymmetry, it is reasonable to believe that suppliers of subsidised education provide a narrower set of options for the students to choose from, even when prices are market determined. This can lead some students to combine their own input to the inputs provided by the institutions less inefficient and make 'educational

prediction' of a lower value. This problem of diminished product diversity is aggravated if tuitions are below their market-determined levels. One of the most commonly used non-market responses to this uncertainty, on the part of student, is 'accreditation', which is a quality control designed to compensate for the lack of market mechanism for shifting the risks and uncertainties associated with the purchase of an informational commodity. It is worth mentioning that there are separate 'moral hazard' problems, associated to the working of the 'accreditation' system.

It is apparent from the above discussion, that tuition fees determined as a market price, and subsidised tuition could both cause inefficiencies in their own ways.

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