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MARKET 1MPERFECTI0NS IN EDUCATION

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The central focus of this study is to examine the potential reasons that help justify government intervention in education market. The degree to which educational market fulfill the conditions necessary to guarantee socially efficient results in education was evaluated. It was found that the existing imperfections in education market may yield socially inefficient results, particularly in the hasic education level. The three majör way of government intervention yvere discussed in brief.

Under certain well-defined conditions, markets in which buyers and sellers meet to exchange goods and services are able to produce efficient results. Hovvever, great care must be exercised when deciding whether or not to rely on markets to produce and distribute a particular good or service, such as education.

This study originated from the investigation of the grounds of government intervention to education market. The central focus was to examine the potential reasons help justify government intervention. In other words, the study to guarantee socially efficient results in education. Education market responses were evaluated in terms of being perfectly competitive and generating efficient results.

Methodology

The study was carried on in three phases. The conditions of being perfectly aimed to determine the degree to which educational market fulfill the conditions necessary competitive and generating socially efficient results were detetmined in the first phase. Special attention vvas given to the public goods theory in the field of public economics. The review of public goods theory led to determination of five main criteria for the evaluation of market efficiency for some goods and services. Because of the limited room available, only a summary of the firt phase is reported in this article. Education market was evaluated in the light of these criteria in the second phase. Responses of education market to each of the five criteria were examined in this phase. Imperfect information and imperfect mobility in education issues are discussed together due to the similarities in causes. The public supplementary, in fact intervention, mechanisms for allocating educational resources were examined in the last phase of the study.

Phase 1: Required Conditions for Efficient Markets

The literatüre on public goods theory and the justification studies of public intervention both deal with and heavily depend on market failures. Those studies emphasize that a number of conditions must be met if private sector of the economy -the market system- is to function efficiently. Indeed, these conditions are essential if the private sector is to perform in the public interest.

When the following five conditions are fulfilled, markets are said to be perfectly competitive and will generate efficient 1 results:

1- *Perfect Information* about what is available, at what price throughout the economy.

2- Ali goods and services produced as well as productive inputs must be *perfectly mobile.*

3- There should be *no market domination* of the markets by either producers, consumers or third parties of any sort.

4- There should be no *jointness in supply.*

5- There should be *no externalities.*

Phase 2: Evaluation of Education Markets

In this section, education market was evaluated in light of the five necessary conditions for socially efficient functioning of markets.

Imperfect Information and Mobility in Education

According to Wise (1979), information in education market is particularly imperfect. The ambiguity about who is the actual consumer of public education, the student or the parent, as well as the tendency for education professionals to be guarded about how much public scrutiny they are vvilling to accept, can make accurate information for consumers difficult to obtain. However, Monk (1990) asserts that, from the producers perspective, information in education markets is probably better than elsewhere in the economy. And he gives the examples of the willingness of educators to accept visitors to their schools and classrooms, the numerous conferences where ideas are shared, and the extensive publicly available body of research related to education. Leslie and Johnson (1974) assert that there exists a bilateral monopoly in higher education, which violates the perfectly competitive model, because of imperfect knowledge among students and parents.

Mobility can also be a serious problem in educational markets. A parent might be knowledgeable about an educational program well-suited for his/her child but be stymied by the distance between the school and the home. Monk (1990) states that the mobility problem occurs in many other markets only once, at the time of purchase. In education markets, on the other hand, is a recurring problem and as such can seriously undermine the efficiency of market Solutions.

Market Domination in Education

In an unregulated market where economics of scale exist, there will be a natural tendency for larger producers to drive out smaller producers. The larger producers vvill become even larger, take advantage of lower unit

1 Markets at best, lead to a particular variety of efficiency. Specifically, it is a Pareto version of "exchange efficiency" with underlying conditions of technical and allocate efficiency. This means that markets lead to results in which it will be impossible to make anyone better off without as consequence making at least one person worse. off. For further explanation see Boadway and Wildasin, 1984; Monk, 1990.

costs, and ultimately dominate the market (Musgrave and Musgrave, 1976; Waisley, 1963; Haveman, 1976;' Boadvvay and VVildasin, 1984). As indicated in the first part the long-term consequence of market domination is likely loss of efficiency.

Are economics of scale intrinsically characteristic of the educational process? The records are mixed in this regard. There is some clear evidence suggesting that very small school system (fewer than 100 pupils) face higher unit costs than do larger systems. On the other hand, there is at best mixed evidence suggesting that unit costs continue to decline as districts grovv larger (Fox, 1981; Monk and Haller, 1986). Moreover, lovv enrollment levels are often accompanied by high levels of scarcity and isolation that can contribute substantially to the cost of operating higher enrollment systems. Finally, there is evidence that once schools grovv beyond a certain enrollment level, diseconomies of scale begin to exist (Fox, 1981). In other vvords, these districts face higher unit costs than do more modest-sized school districts.

It seems clear that educational production is not characterized by such significant economics of scale that unit cost everyvvhere declines as size increases. If this is correct, the concern about inefficiency stemming from a natural tendency for one or few producers to dominate the market has little relevance in the case of education. Monk (1990) argues that this dismisses one of the standard arguments in public finance for justifying public involvement in the functioning of markets. Hovvever, market domination can not be the sole cause of marketing inefficiency. Jointness in supply and external effects can also lead to inefficient market results.

Another issue about market domination is the kind of competition in education market. Leslie and Johnson (1974) point out that competition in higher education market is of the non-price variety. That is, institutions in the market set their own price (tuition and fees) dependent upon operating cost, endovvments, and income from governments and other sources. In other words, each higher education institution fix its particular price independent of other institutions and in this sense act a monopolistic.

Jointness in Supply of Educational Services

Education is a jointly supplied service, to some degree. Hovvever, the price degree to which education is jointly supplied remains ambiguous (Brovvn and Saks, 1980). VVhen two students sit in a lecture hail, the fact that one student listens to the instructor does not preclude the other students from listening simultaneously. Hovvever, this interpretation is overly simplistic. As more students are added, there will be a point beyond vvhich the number of students begin to interfere with the ability of students to hear, much less learn (Monk, 1990). Moreover, in the case of addition of a student who ıs unprepared for the class, this may disrupt the whole learning process (especially it is a seminar rather than lecture).

ıMucators and economists agree on the fact that elements of jointness *in* education are significant. This means that jointness of education services interfcres vvith the education market's ability to generate efficient results. As Monk (1990) states, jointness also poses significant resource

allocation issues. Because, it becomes difficult to measure the flow of resources to individuals when it is unclear what conditions educational resources are in joint supply.

Externalities in Education

There is a vvidespread agreemenı that the external effects of education is the main reason for both the justification as a public service and failure. In addition to private benefits to students, education benefits others. The classic work dealing the external effects of education has been done in 1960's by VVeisboard. In Weisboard's words:

> Schooling benefits many persons other than the student and his present family. It benefits the student's future children, who will receive informal education in the home; and it benefits neighbors, who may be affected favorably by the social values developed in children by the school, and even by the quietness of the neighborhood while the schools are in session. Schooling benefits employers seeking a trained labor force; and it benefits the society at large by developing the basis for an informed electorate (1964, p.16).

Specifically, he identifies external benefits of education that are related to residence, employment, and society in generaH. Residence benefits include those that accrue to members of the current family, neighbors, and the more general class of taxpayers. As one example of a benefit that accrues to the current family, VVeisboard emphasizes the child care by-product of schooling. This externality is more significant today than when VVeisboard vvrote. Neighbors benefit because of the acceptable social values and behavior norms that schools help to establish. Taxpayers in general benefit because of the costs they are able to avoid due to education. Employment-related benefits refers to instances in which the education of one employee occasions and improvement in the productivity of other employees. As a leader educated or trained vvorker help the improvement of the other vvorkers productivity.

Benefits to society are described as both economic or noneconomic terms. Education contributes to economic growth of the whole society in a number of ways. Most important is the direct improvement in productivity associated with upgrading of labor skills. Education allows employees to enter the vvorkforce at a higher level. to adjust to changes in the requirements of the position, and to progress to more complicated task more rapidly. In addition, better-educated workers produce an improved product, provide services more skillfully and produce more goods and services över a specified period (Bowen, 1977). Moreover, education helps maintain social cohesion by reducing social inequities.

Bowen (1971; 1977) makes a similar categorization about public benefits of higher education: (a) Public benefits from instruction: Improving the allocation of labor by helping students to find careers. Improving citizenship. Reducing erime, improving citizenship, improving the home

2 For similar classification of educational external benefits see Guthrie, Garms, andPierce, 1988.

çare and training of children, providing the leadership in charting new courses for society, and speeding the acceptance and diffusion of new technology. (b) Social benefits as a center of research, scholarship, and criticism. (c) Social benefits as versatile pool of talent. (d) Social benefits as patron of the arts. (e) Social benefits from community college.

Studies on regional impact of higher education have showed that higher education produces significant economic external benefits to regional economy. Bluestone and others (1993), for instance, found that University of Massachusetts at Boston has been an extraordinarily lucrative investment even if one merely considers the beneficiary to the state itself. In summary, external benefits are important for two reasons. First, from an equity point of view, if costs of private or public services are to be born by those who benefit from them, then those who receive external benefits should contribute to the financing of education. Second, an optimal level of educational expenditure vvill result only if external benefits are included in the determination of educational spending. If they are omitted, too little education vvill be consumed from an economic efficiency perspective (Guthrie, Garms,, and Pierce, 1988).

In spite of their general acceptance, many external effects are vaguely conceptualized and poorly measured. For instance, even market failures and externalities are undoubtedly accepted, it is almost impossible to calculate the precise degree to vvhich the market vvould underprovide education, Moreover, for some externalities it is possible to exclude nonpurchasers from educational services. The failure to pay tuition can lead to dismissal, as can the failure to make adequate progress. In this type of situations the only justification criteria is the potential for inefficiency to exist. For instance, lefs assume nonpurchaser are excluded so that classes operate at less than full capacity; that is because there are empty seats, the classes operate at less than full capacity. Since education is jointly supplied, the addition of a student to the class vvould not harm any of the present numbers of the study. The nevv student vvould be better off while existing members of the class vvould be no more vvorse off.

Phase Three: Role of Government in Education

The conclusion of the second part is that education markets, if left to operate independently, may lead systematically to socially inefficient results. If education markets are flawed, then alternative mechanisms that achieve demonstrably superior results need to be found. This section examines alternative vvays government intervention to ensure efficient levels of educational services. This part resulted in that government can intervene three vvays to provide a more efficient level of education. Ali these three alternative vvays are suggested by Milton Friedman who has a position that the influence of the market economy should be extended vvherever possible3.

Government Regulation

3 For the tvvo opposing arguments about market and government role in education see Friedman, 1963 and Vaizley, 1963.

In a case of private education, limited number of families vvould purchase educational services. Hovvever, contemporary communities may agree that a minimum of eight or ten years of basic education are needed to yield a minimum level of citizenship. Less than that amount might leave students ili prepared to find employment or participate in community affairs.

This situation vvould place an economic burden upon others and increase social tensions in the community. In the presence of such externalities, government could require each student to receive a minimum number of years of basic education. It could then require that basic skills in reading, vvriting, arithmetic, and citizenship training be included in the basic education programs (Guthrie, Garms, and Pierce, 1988).

Compulsory attendance lavvs, curriculum requirements, and minimum requirements for the lengtlı of the school day and school year are regulatory mechanisms used by government to ensure adequate provision of education services.

Government Subsidy

This method of ensuring adequate basic education is based on the premise that individuals and families will purchase more of something at a lovver price than at a higher price. Guthrie and others (1988) argue that the utility of subsidies in promoting an efficient level and type of educational performance depends upon (a) the sources of subsidy and (b) the methods by vvhich it is distributed. The aim of government subsidies is to encourage families for further education.

The actual effect of subsidies in reducing a family's educational costs, and thereby determining the level and kind of education purchased depends also on the kind subsidy. For instance, community may decide a ten year minimum basic education subsidy in the form of equal dollar amounts per school-age child vvould not be an efficient way of accomplishing the community's purpose. In this case, families would tend to use public funds to purchase vocational and professional training which have high private benefits. To achieve the desired public benefits, the community would have to restrict the subsidy's use to particular programs and perhaps to particular districts or schools. If the community wants to reduce income inequalities, it must decide to provide larger subsidies for children from low-income families.

Government Provision

Public provision of education ıs a third means of ensuring that individuals take account of education's external benefits. This is the commonly used method along vvith certain requirements imposed on ali children. For instance, the United States spent $200 billion to maintain the public educational industry in 1988 (Guthrie et al., 1988). The main reason of the maintenance of the public education industry is that public schools are necessary to maintain a common core of values and thus promote social cohesion and political stability.

Conclusion

The central focus of this study vvas to determine the degree to v/hich educational markets fulfill the conditions necessary to guarantee socially

efficient results in education. • The literatüre revievv and evaluation of, education markets led to a negative conclusion. It was found that it is possible for education market to operate, but at the same time it may lead systematically to socially inefficient results particularly for the basic education. This finding has meaningful for underdeveloped or developing countries where there is significant difference in income distribution. In other words, equity, one of the primary tenets of a country's education system, may hurt if the education system is left to the market forces only.

The study provided a description of the reasons and issues in the decision of government to allocate educational services. It also provided a base for today's primary issue in educational finance: what do governments do in a time of competing government demands.

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