

# Chapter 5

## Education and Economic Growth: Measuring Efficiency in Education Through DEA Method

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### **ABSTRACT**

*This chapter aims to analyze the framework of education and to measure the efficiency of education by means of the Data Envelopment Analysis method. The Data Envelopment Analysis is a nonparametric method used in operational research and in economics for estimating production frontiers. It can be used to measure empirically the efficiency of decision making units (DMUs). Measuring efficiency in education is of high priority as substantial investments in education are made by the European Union contributing thus to the accumulation and growth of human capital. Education, training and lifelong learning, are important “levers” that contribute towards the economic growth and the enhancement of competitiveness. The skills acquired by the employees through training and lifelong learning raise the corporate competitiveness by achieving economic growth and also assist in meeting their corporate and individual social responsibilities. The educational process at all levels is not just a simple truth that is continuously verified. It is the basis upon which Europe is based on. It is a collective investment of high priority which contributes to the macro and micro-economic objectives of the EU economies. It contributes to the harmonious social growth of the EU countries and the formation of peoples’ intellectual culture.*

### **INTRODUCTION**

#### **Definition of Education**

Education constitutes a fundamental human right which contributes to the social and humanitarian growth through the acquisition of knowledge and dexterities. With the term “education” is determined each type of enacted form of teaching that is carried out in educational institutions, independently from

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whether it is provided by the state or by private institutions. According to Mr. Kapsalis and Papastamati (2000), each activity that produces or transports knowledge from the instructor, develops the technical and professional faculties – dexterities of individual characteristics. Mr. Hatzidemos (2005), reports that education is an “institution of state” with concrete training objectives and content, that presents limited time duration.

The European Union in the course of time understood the importance of education for the member countries and aims to aims to educational development through various programs. The new strategic framework “Education and Training 2020” provides common strategic objectives within the countries of the European Union by placing as fundamental objective the creation of Europe-based methods of learning and knowledge spectrum (Official Newspaper of EU, 2009).

Education as a basic product of qualitative training is distinguished in certain forms that characterize the way with which it is materialized. These forms are presented below:

- **Formal or Official Education:** Is the basic education that concerns private and public educational units from the kindergarten until the tertiary education. The entrance point to higher education is usually by succeeding the appropriate examinations.
- **Informal Education:** Is the education regulated by the Ministry of Education, through analytic programs with set duration of study and various other factors. This kind of education is offered in included schools, which are not included in the formal education, various tuition centers, high-speed programs and centers offering free of charge courses of study.

It is however remarkable to report that Mincer (1994) distinguishes the education in general and special. The general education is the education the individual receives from school while the special education is the one that is received in the work environment.

## **Social, Political, and Economic Dimension of Education**

The dimensions of education are multiple (social, economic, cultural and developmental) and equally important as they contribute to a more correct constitution of personality and growth of the individual. With regard to the social dimension of education, it should be noted that it seeks the promotion of the person as an individual and as a member of the social total by recognizing that individual rights and their limitations when regarding the right of the fellow citizen. The cultural dimension of education transmits, judges and improves the culture of the past while with the economic dimension prepares the person in order to it be included in the productive process (Figure 1) (Psacharopoulos, 1999). However, in order for the individual to reach the developmental dimension it should first be specialized in the sector of his/her preference by guaranteeing thus the necessary basic knowledge. In general, through the local growth will befall the general growth contributing thus in the economy in its entirety.

We could characterize the education as a mediatory effect where a person comprehends the relation between the natural and social reality and becomes an active member of it and thus capable of altering him as a personality. Educational mechanisms constitute the coupling of knowledge and action in a given time period.

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